INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	November 20, 2014
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	SABIC Innovative Plastics Mt. Vernon LLC
Permit Level:	Title V PSD/SSM
Permit Number:	129-33998-00002
Source Location:	1 Lexan Lane Mt. Vernon, Indiana 47620
Type of Action Taken:	Modification at an existing source

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 33998.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

Mr. Gregory Michael
SABIC Innovative Plastics Mt. Vernon, LLC
1 Lexan Lane,
Mt. Vernon, Indiana 47620

November 20,2014

Re: 129-33998-00002
PSD/Significant Source Modification to
Part 70 Renewal No.: T129-30384-00002

Dear Mr. Gregory:

SABIC Innovative Plastics Mt. Vernon, LLC was issued a Part 70 Operating Permit Renewal No. 129-30384-00002 on November 1, 2011 for a stationary plastic manufacturing plant located at 1 Lexan Lane, Mt. Vernon, IN 47620. An application to modify the source was received on December 16, 2013. Pursuant to the provisions of 326 IAC 2-7-10.5, a significant source modification to this permit is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

(a) The natural gas-fired AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) as identified below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER(and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in the permit.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to an affected source, as defined pursuant to the NESHAP. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is a new affected source subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section D.1 of this permit.

Significant Activities

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices	Maximum Capacity	Date of Construct
19-002	AUX BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-004	AUX 2 BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-005	CG1 BOILER	Natural gas-fired boiler with low-NOx burner	None	None	249 MMBtu/hr	NA

COGEN

(a) The natural gas-fired COGEN emission unit is located in the COGEN Area as identified below. COGEN consists of a natural gas-fired stationary combustion turbine and a heat recovery steam generator (HRSG) with duct burner. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to the affected facility. COGEN is an affected facility pursuant to 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. The requirements of 40 CFR 60, Subpart KKKK, that are applicable to COGEN (including the HRSG with Duct Burner), are specified in this section of the permit. Because the requirements of 40 CFR 60, Subpart KKKK, apply to COGEN (including the HRSG with Duct Burner), the requirements of 40 CFR 60, Subpart Db, are not applicable to the Duct Burner.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the affected source. COGEN is an affected source pursuant to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The requirements of 40 CFR 63, Subpart YYYY, that are applicable to COGEN are specified in this section of the permit. Pursuant to 40 CFR 63.6095(d), Stay of standards for gas-fired subcategories, the COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

(d) Pursuant to the definitions contained in 40 CFR 63.7575, waste heat boilers are excluded from the definition of "boiler". Waste heat boilers are defined to include duct burners; therefore, the HRSG, a waste heat boiler with duct burner, is not considered an affected source pursuant to 40 CFR 63, Subpart DDDDD.

(e) Pursuant to 40 CFR 63.6092, the HRSG with duct burner is not considered an affected source pursuant to 40 CFR 63, Subpart YYYY.

Significant Activities

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices	Maximum Capacity	Date of Construct
19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).	Oxidation Catalyst	None	1,812 MMBtu/hr	NA

Additional New/Modified Emissions Units:

1. Thermal oxidizer, to control the existing SHEETFUMES emission units.

2. Conversion of BW1-BOILER and BW2-BOILER to burn only natural gas.

Table 2-1: Summary of COGEN Project Emission Units

Location	Emission Unit	COGEN Project Modifications
Boilerhouse I	09-100 BW BOILER	Permanently shut down
	09-002 E BOILER	Permanently shut down
	09-002 L BOILER	Permanently shut down
Boilerhouse II (to remain operating with natural gas-fired units only)	01-001 BW1-BOILER	Convert to burn natural gas only
	01-001 BW2-BOILER	Convert to burn natural gas only
COGEN Plant (new stationary gas combustion turbine with duct firing and CO oxidation catalyst and optional SCR)	19-001 COGEN	New emission unit installation
	19-002 AUX BOILER	New emission unit installation
	19-004 AUX2 BOILER	New emission unit installation, if W.1.19 is elected
	19-005 CG1 BOILER	New emission unit installation, if W.1.19 is elected
	19-003 COGEN SCR	New alternate control device installation
Structured Products (existing emissions units unchanged; adding new, more efficient controls)	09-600 SHEETFUMES TO	New control device installation

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the

rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

Commenced Construction
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(j), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(m), the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

Approval to Construct
7. Pursuant to 326 IAC 2-7-10.5(h)(2), this significant source modification authorizes the construction of the new emission unit(s), when the significant source modification has been issued.

Pursuant to 326 IAC 2-7-12, operation of the new emission unit(s) is not approved until the significant permit modification has been issued. Operating conditions are incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(m)(2) and 326 IAC 2-7-12 (Permit Modification).

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the **IDEM Permit Guide on the Internet at:** http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions on this matter, please contact Josiah Balogun, of my staff, at 317-234-5257 or 1-800-451-6027, and ask for extension 4-5257.

Sincerely,

Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Attachments: Updated Permit, Technical Support Document and Appendix A

MS/JB

cc: File - Posey County
Posey County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Southwest Regional Office (SWRO)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

Significant Source Modification to a Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

SABIC Innovative Plastics Mt. Vernon, LLC
1 Lexan Lane
Mt. Vernon, Indiana 47620

(herein known as the Permittee) is hereby authorized to construct subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

PSD/Significant Source Modification No.: 129-33998-00002	
Issued by: Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality	Issuance Date: November 20,2014

TABLE OF CONTENTS

A. SOURCE SUMMARY

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]
A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]
A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

B. GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]
B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]
B.3 Term of Conditions [326 IAC 2-1.1-9.5]
B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]
B.5 Severability [326 IAC 2-7-5(5)]
B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)][326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]
B.11 Emergency Provisions [326 IAC 2-7-16]
B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]
B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]
B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]
B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]
B.17 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]
B.18 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12] [40 CFR 72]
B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]
B.20 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]
B.21 Source Modification Requirement [326 IAC 2-7-10.5]
B.22 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]
B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]
B.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]
B.26 Applicable Requirements

C. SOURCE OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

C.2 Opacity [326 IAC 5-1]
C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
C.5 Fugitive Dust Emissions [326 IAC 6-4]
C.6 Reserved
C.7 Stack Height [326 IAC 1-7]
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

Testing Requirements [326 IAC 2-7-6(1)]
C.9 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]
C.10 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]
C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]
C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
C.13 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
C.14 Monitoring Methods [326 IAC 3][40 CFR 60}[40 CFR 63]
C.15 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]
C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.17 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
C.18 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)] [326 IAC 2-6]
C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]
C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

Stratospheric Ozone Protection
C.23 Compliance with 40 CFR 82 and 326 IAC 22-1

Certification
Emergency Occurrence Report
Quarterly Deviation and Compliance Monitoring Report

Section D — Boilerhouse II, Building 2

D.1 - Boilerhouse II Affected Facilities/Sources
D.2 - Natural Gas fired boilers

D.3 - Boilerhouse II, Building 2
D.4 - Ash Handling
Reporting Forms

Section E — Permit - Phenol, Buildings 40 and 42
E.1 - Phenol Affected Facilities/Sources
E.2 - Phenol Oxidation Process
E.3 - Phenol Distillation Process
E.4 - Phenol Hazardous Waste Boilers
E.5 - Phenol Area Tanks
E.6 - Phenol Heat Exchange System and Transfer Operations
E.7 - Phenol Waste
E.8 - Phenol Leak Detection and Repair (LDAR) Components
E.9 - Certain liquid streams in open systems
E.10 - Hazardous Waste Combustors MACT
Reporting Forms

Section F — BPA, Buildings 15, 31, 56 and 49
F.1 - BPA Affected Facilities/Sources
F.2 - BPA Process Operations
F.3 - BPA Flaking, Loading, and Silo Operations
F.4 - BPA Area Tanks
F.5 - BPA Oil Heating Operations
F.6 - BPA Heat Exchange System and Area Waste
F.7 - BPA Leak Detection and Repair (LDAR) Components
F.8 - Certain liquid streams in open systems
Reporting Form

Section G — LEXAN# Resin, Buildings 14 and 16
G.1 - LEXAN# Resin Affected Facilities/Sources
G.2 - LEXAN# Resin Process Operations
G.3 - LEXAN# Resin Area Tanks
G.4 - LEXAN# Resin Waste
G.5 - LEXAN# Resin Leak Detection and Repair (LDAR) Components
G.6 - Certain liquid streams in open systems

Section H — Brine Recovery, Building 32
H.1 - [Reserved]
H.2 - Brine Recovery Operations

Section I — Phosgene, Building 6
I.1 - Phosgene Affected Facilities/Sources
I.2 - Phosgene Carbon Monoxide Generators and COS (Carbonyl Sulfide) Stream
I.3 - Phosgene Heat Exchange System and Area Waste
Reporting Forms

Section J — LEXAN# Finishing, Building 13
J.1 - LEXAN# Finishing Operations

Section K — Boilerhouse I
K.1 - [Reserved]
K.2 - BH I Boilers
K.3 - BH I Storage and Heat Exchange Operations
Reporting Forms

Section L — Structured Products, Building 4
L.1 - Structured Products Affected Facilities/Sources
L.2 - Structured Products Operations
L.3 - Temporary Boiler
Reporting Forms

Section M — LEXAN# Development, Building 7
M.1 - LEXAN# Development Operations

Section N — CPP Resin, Buildings 28, 34, and 60
N.1 - CPP Resin Affected Facilities/Sources
N.2 - CPP Resin Process Operations
N.3 - CPP Resin Area Tanks
N.4 - CPP Resin Leak Detection and Repair (LDAR) Components
Reporting Form

Section O — CPP Finishing Area
O.1 - CPP Finishing Operations

Section P — HPP Co-Polymer, Buildings 47 and 48
P.1 - HPP Co-Polymer Affected Facilities/Sources
P.2 - HPP Co-Polymer Operations

Section Q — HPP ChemOps, Buildings 58 and 59
Q.1 - HPP ChemOps Affected Facilities/Sources
Q.2 - HPP ChemOps Operations
Reporting Forms

Section R — HPP Finishing, Building 62
R.1 - HPP Finishing Operations

Section S — Emergency Generators and Pumps, Entire Plant Site
S.1 - Emergency Generators and Pumps
S.2 - Standby Energy Curtailment Generators and Mobile Diesel Units
S.3 - Temporary Emergency Generators
S.4 - Plant-Existing, New, Modified or Reconstructed Stationary ICE Affected Facilities/Sources
Reporting Forms

Section T — High Bay, Building 1A
T.1 - High Bay Operations

Section U — Wastewater Treatment Plant
U.1 - Wastewater Treatment Plant (WWTP) Operations

Section V — Plant-MON

V.1 - Plant-MON Affected Facilities/Sources

V.2 - Group 1 MON Process Activities' Emission Limits and Work Practices

Section W — COGEN

W.1 - COGEN AUX BOILER

W.2 - COGEN

Attachment A - Federal Rules Sections

SECTION AA ..... 40 CFR Part 63, Subpart F
SECTION BB ..... 40 CFR Part 63, Subpart G
SECTION CC ..... 40 CFR Part 63, Subpart H
SECTION DD ..... 40 CFR Part 63, Subpart YY
SECTION EE ..... 40 CFR Part 63, Subpart SS
SECTION FF ..... 40 CFR Part 61, Subpart FF
SECTION GG ..... 40 CFR Part 60, Subpart VV
SECTION HH ..... 40 CFR Part 60, Subpart NNN
SECTION II ..... 40 CFR Part 60, Subpart Db
SECTION JJ ..... 40 CFR Part 63, Subpart TT
SECTION KK ..... 40 CFR Part 60, Subpart Kb
SECTION LL ..... 40 CFR Part 63, Subpart JJJJ
SECTION MM ..... 40 CFR Part 63, Subpart I
SECTION NN ..... Reserved
SECTION OO ..... 40 CFR Part 63, Subpart PPPP
SECTION PP ..... 40 CFR Part 60, Subpart Dc
SECTION QQ ..... 40 CFR Part 63, Subpart FFFF
SECTION RR ..... 40 CFR Part 63, Subpart EEE
SECTION SS ..... 40 CFR Part 63, Subpart ZZZZ
SECTION TT ..... 40 CFR Part 60, Subpart IIII
SECTION UU ..... 40 CFR Part 60, Subpart JJJJ

Attachment C : **40 CFR 63, Subpart DDDDD**

Attachment D : **40 CFR 60, Subpart KKKK**

Attachment E : **40 CFR 60, Subpart Db**

Attachment F : **40 CFR 63, Subpart YYYY**

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.23 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary plastics manufacturing plant.

Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
General Source Phone Number:	(812)-831-7000
SIC Code:	2821
County Location:	Posey
Source Location Status:	Attainment or unclassifiable for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

A.3 Boilerhouse II [Section D]

A.3.1 Boilerhouse II, Building 2

<u>Boilerhouse II Affected Facilities/Sources</u>

(a) The affected facilities at Boilerhouse II that are subject to 40 CFR 60, Subpart Db are identified as NE BOILER, BW GAS, and H BOILER. The affected facility is a device which combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium, commences construction, modification, or reconstruction after June 19, 1984, and has a heat input capacity of greater than 100 million Btu per hour.

(b) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER

The Boilerhouse II area includes boilers that are part of existing affected sources subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The "unit designed to burn coal/solid fuel subcategory" includes any boiler or process heater than burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

The following emissions units constitute the existing affected source for the "unit designed to burn coal/solid fossil fuel subcategory": BW1-BOILER, BW2-BOILER, and E BOILER. For clarification purposes, E BOILER is located in Boilerhouse I, Section K of this Part 70 permit.

After the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and shutdown of E BOILER, the BW1-BOILER, BW2-BOILER, and E BOILER will no longer be part of the "unit designed to burn coal/solid fossil fuel subcategory."

(2) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW BOILER, R BOILER, H-390, H-109, H-790, H-900, H-900B, and H-520. For clarification purposes, R BOILER and BW BOILER are located in Boilerhouse I, Section K of this Part 70 permit; H-390, H-109 and H-790 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

(b) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

The Boilerhouse II area includes boilers which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel

boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW1-BOILER, BW2-BOILER, R BOILER, H-390, H-109, H-790, H-900, H-900B, and H-520. For clarification purposes, R BOILER is located in Boilerhouse I, Section K of this Part 70 permit; H-390 H-109 and H-790 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

The following emissions units constitutes a new affected source for the "unit designed to burn gas 1 subcategory": AUX BOILER and if the alternative operating scenario in W.1.19 is elected, AUX2 BOILER and CG1 BOILER (in Section W of this Part 70 permit.)

(2) [RESERVED]

Natural Gas-fired boilers

(c) The three (3) natural gas fired boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-101	NE BOILER	NEBRASKA BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1989
01-014	BW GAS	B&W #3 GAS BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1996
01-100	H BOILER	HOLMAN BOILER VENT natural gas-fired, low-NOx burners and flue gas recirculation	None	None	200 MMBtu/hr	1996

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

Coal/Natural Gas-fired boilers

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two (2) coal-fired and natural gas-fired boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control

device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-001	BW1-BOILER	B&W #1 BOILER Coal-fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979
01-001	BW2-BOILER	B&W #2 BOILER Coal-fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two boilers converted from coal-fired to natural gas-fired only that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-001	BW1-BOILER	B&W #1 BOILER Natural gas-fired only	None	None	249 MMBtu/hr	1979, modified in 2014
01-001	BW2-BOILER	B&W #2 BOILER Natural gas-fired only	None	None	249 MMBtu/hr	1979, modified in 2014

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

<u>Ash Handling - BEFORE Coal Ceases to Be Transferred at Boilerhouse II</u>

(e) The ash handling equipment located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission

unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-006	BF-ASVB	BAG FILTER FOR ASH HANDLING SYSTEM	None	Bagfilter	11.3 tons/hr	1979

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-005	TRDB	TRIPPER ROOM DUST BLOWER	None	None	30 tons/hr	N/A
01-007	ASVBF	ASH SILO BAG FILTER	Bagfilter*	None	11.3 tons/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))
* There are no control requirements for the bagfilter associated with stack/vent ID 01-007 because uncontrolled emissions/hour are only about 10 percent of the allowable emissions for this emission unit.

Ash Handling - AFTER Coal Ceases to Be Transferred at Boilerhouse II

(e) [**RESERVED]**

A.4 Phenol [Section E]

A.4.1 Phenol, Buildings 40 and 42

Phenol Affected Facilities/Sources

(a) The Phenol Chemical Manufacturing Process Unit (PhCMPU) subject to 40 CFR 63, Subpart F, G, and H is identified by its primary product, which is Phenol. The PhCMPU consists of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture Phenol. A chemical manufacturing process unit consists of more than one unit operation. The PhCMPU includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems.

(b) PhD-285, in which Phenol and Acetone are formed, is an affected facility subject to 40 CFR 60, Subpart RRR. PhD-285 consists of unit operations in which one or more chemicals, or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed, plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(c) PhC-650, the cleavage, Acetone, and Phenol distillation unit and recovery system in the Phenol plant, is an affected facility subject to 40 CFR 60, Subpart NNN. PhC-650 consists of a device or vessel in which distillation operations occur, including all associated internals (such as tray or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(d) The Phenol Chemical Manufacturing Plant, identified as FF_CMP, is subject to 40 CFR 61, Subpart FF because it is a facility engaged in the production of chemicals by chemical, thermal, physical, or biological processes for use as a product, co-product, by-product, or intermediate.

(e) PhVV is an affected facility in the Phenol Process Unit subject to 40 CFR 60, Subpart VV. PhVV consists of components assembled to produce Phenol and includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valve or lines, valves, and flanges or other connectors in VOC service and any other devices or systems required by Subpart VV.

(f) The Phenol area includes a process heater, identified as H-520, which is part of an existing affected source (unit designed to burn gas 1 subcategory) subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to H-520 are specified in Section D.1 of this permit.

(g) The Phenol Area includes a miscellaneous organic chemical manufacturing unit (MCPU) which is part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing unit is identified as PhMON_PCP. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials in 40 CFR 63.2435(b)(1) that are not otherwise exempted from requirements of 40 CFR 63, subpart FFFF. MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to PhMON_PCP are specified in Section V of this permit.

Phenol Oxidation Process

(h) The Phenol Oxidation Process consists of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-002	E-244	OXIDATE TK VENT CHILLER	None	E-244 is a recovery device	N/A	1979
03-107*	F-235A/B/C/D	CARBON ADSORBERS	Thermal combustion unit (PhTCU)	F-235A/B/C/D is a recovery device	N/A	1979
03-107*	R-670	DETOX	Thermal combustion unit (PhTCU)	None	N/A	1979
N/A	PhDetox WW	PHENOL DETOX WASTEWATER STREAM	None	None	N/A	N/A
N/A	D285	REACTOR PROCESS VENT	None	None	N/A	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

* Emissions from the combined oxidizers and oxidate settlers can either be vented directly to the atmosphere, through the carbon adsorbers, or through both the carbon adsorbers and the thermal combustion unit.

Phenol Distillation Process

(i) The Phenol Distillation Process consists of the emission units C650, E-429, and H-520.. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7.

The Phenol plant area includes a MON MACT (40 CFR 63 Subpart FFFF) miscellaneous organic chemical manufacturing unit (MCPU) for the production of PCP. The MCPU is identified as PhMON_PCP. E-492 is a Group 2 Continuous Process Vent in PhMON_PCP. MON MACT requirements applicable to E-492 are contained in permit Section V.

This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
03-005	C-650	CLEAVAGE, ACETONE & PHENOL DISTILLATION	None	BACT: condensers + scrubber (E-614, E-314, C-650)	N/A	1979
03-006	E-429	AMS TOP COL VENT CHILLER	None	E-429 is a recovery device	N/A	1979
03-007	H-520	NATURAL GAS FIRED HEAVY ENDS COLUMN REBOILER	None	None	7.7 MMBtu/hr	1979
03-109	E-492	PCP VENT CONDENSER	None	E-492 is a recovery device	N/A	2002

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

Phenol Hazardous Waste Boilers

(j) The boilers located in the Phenol Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
03-008	H-530A	LIQUID WASTE RESIDUE/GAS FIRED BOILER	None	None	75 mmBtu/hr	1979
03-008	H-530B	LIQUID WASTE RESIDUE/GAS FIRED BOILER	None	None	75 mmBtu/hr	1982

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

Phenol Area Tanks

(k) Tanks located in the Phenol Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-009	V-635	PHENOLIC WATER IMPOUNDMENT TANK/AMS SURGE TANK	None	None	802 m^3	1979
03-010	V-630	DEPHENOLATION FEED TANK	None	None	90 m^3	1979
03-011	D-620	SLOP OIL DRUM	None	None	12.8 m^3	1978
03-013	V-520	OFFSITE AMS STORAGE TANK	None	None	69.7 m^3	1979
03-018	V-704C	CUMENE STORAGE TANK	None	None	10,705 m^3	1978
03-019	V-525A	WASTE HYDROCARBON STORAGE TANK	Condenser or flameless thermal oxidizer	None	558 m^3	1979
03-020	V-704A	CUMENE STORAGE TANK	None	None	10,478 m^3	1978
03-021	V-704B	CUMENE STORAGE TANK	None	None	10,478 m^3	1978
03-024	V-701A	PHENOL STORAGE TANK	None	None	1,873 m^3	1978
03-025	V-701B	PHENOL STORAGE TANK	None	None	1,873 m^3	1978
03-031	V-525B	WASTE HYDROCARBON STORAGE TANK	Condenser or flameless thermal oxidizer	None	558 m^3	1982
N/A	V-310B	Splitter Feed Tank	None	None	1,982 m^3	1988
N/A	V-415B	Crude AMS Tank	None	None	601 m^3	1988
N/A	V-701C	PHENOL STORAGE TANK	None	None	1,929 m^3	1988
03-110	V-455	PROCESS REWORK TANK	None	None	27 m^3	2001

Note: The condenser or flameless thermal oxidizer is operated pursuant to RCRA requirements and has no applicable limits or operating requirements under this Part 70 operating permit.

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
03-027	V-528	SEAL FLUSH TANK	None	None	less than 8 m^3	1988
03-030	V-720	WASTEWATER STORAGE TANK	None	None	3,875 m^3	1990
03-112	V-760	PCP STORAGE TANK	None	None	280 m^3	2001

[a] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

[b] Equipment is integral to the process operation.

[c] When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

[d] Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

Phenol Heat Exchange System and Transfer Operations

(l) The Phenol heat exchange system located within the PhCMPU is described as the entire recirculating cooling system which is connected to the cooling towers listed as emission units below and identified as PNL CTC1, PNL CTC2, PNL CTC3, PNL CTC 4, and PNL CTC5.

(m) The Phenol transfer operations located within the PhCMPU are identified as emission units PNL TRUCK and PRC below. The transfer operation located within PhMON_PCP is identified as emission unit SP-402.

(n) The barge loading operation, identified as BARGE, is associated with the phenol plant. The BARGE operation conducts bulk loading of acetone onto marine tank barges, which activity is a marine tank vessel loading operation under 40 CFR 63 Subpart Y. The acetone contains organic HAP only as an “impurity”, as defined in 40 CFR 63.561. BARGE is a “source with emissions less than 10 and 25 tons”, as defined in 40 CFR 63.561.

Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]
03-032	PNL TRUCK	PHENOL TRUCK LOADING	Scrubber	None
03-033	PRC	PHENOL RAIL CAR LOADING	None	None

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]
03-100	PNL CTC1	PHENOL COOLING TOWER CELL 1	None	None
03-101	PNL CTC2	PHENOL COOLING TOWER CELL 2	None	None
03-102	PNL CTC3	PHENOL COOLING TOWER CELL 3	None	None
03-103	PNL CTC4	PHENOL COOLING TOWER CELL 4	None	None
03-104	PNL CTC5	PHENOL COOLING TOWER CELL 5	None	None
N/A	BARGE	ACETONE BARGE LOADING	None	None
03-111	SP-402	PCP RAIL CAR LOADING	None	None

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

Phenol Waste

(o) The Phenol area waste is identified as:

(1) A process wastewater stream discarded from the PhCMPU identified as Dephenate Stream which contains a total annual average concentration of organic HAP's listed in table 9 of 40 CFR 63, Subpart G less than 1,000 parts per million by weight; and

(2) HON Maintenance Wastewater, discarded from the PhCMPU that contains organic HAP's listed in table 9 of 40 CFR 63, Subpart G; and

(3) The Benzene containing waste subject to the Benzene Waste Operations NESHAP, 40 CFR 61, Subpart FF, discarded from the Phenol Chemical Manufacturing Plant. FF_CMP identifies the benzene-containing hazardous waste stream(s) generated by the production of chemicals by chemical, thermal, physical, or biological processes for use as a product, co-product, by-product, or intermediate and is either treated, stored, or disposed of.

Phenol Leak Detection and Repair (LDAR) Components

(p) The Phenol chemical manufacturing process unit (CMPU) consists of equipment subject to LDAR. LDAR applies to Phenol CMPU components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems intended to operate in organic hazardous air pollutant service for 300 hours or more during the calendar year and/or volatile organic compound (HAP/VOC) service for any amount of time during the calendar year. In HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight HAP. In VOC service means that a piece of equipment either contains or contacts a fluid that is at least 10 percent VOC by weight.

Certain liquid streams in open systems

(q) The Phenol chemical manufacturing process units (PhCMPU) includes certain liquid streams subject to open system control requirements. These control requirements apply to the PhCMPU components described as:

(1) A drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flowrate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute; and/or

(2) A tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute.

Hazardous Waste Combustors MACT

(r) This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source subject to the applicable regulation.

(1) H-530A and H-530B are each a hazardous waste liquid fuel boiler; each boiler also burns natural gas as fuel. Each of the boilers is an affected source subject to the Hazardous Waste Combustor MACT (40 CFR 63, Subpart EEE). Each of the boilers is an “area source”. The boilers burn natural gas and liquid hazardous waste with an as-fired heating value of 10,000 Btu per pound or greater. Neither of the boilers requires or uses air pollution control systems to achieve compliance with Subpart EEE. H-530A and H-530B combustion gases vent through a common stack (03-008) and do not require, or have, emergency safety vents.

A.5 BPA [Section F]

A.5.1 BPA, Buildings 15, 31, 56, and 49

BPA Affected Facilities/Sources

(a) The BPA Chemical Manufacturing Process Unit (BpaCMPU) subject to 40 CFR 63, Subpart F, G, and H is identified by its primary product, which is Bisphenol-A. The BpaCMPU consists of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture Bisphenol-A. A chemical manufacturing process unit consists of more than one unit operation. The BpaCMPU includes reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems.

(b) The affected facilities subject to 40 CFR 60, Subpart NNN are identified as BpaV-6100. The affected facilities consist of a device or vessel in which distillation operations occur, including all associated internals (such as tray or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(c) [Reserved]

(d) BpaVV is an affected facility in the BPA Process Unit subject to 40 CFR 60, Subpart VV. BpaVV consists of components assembled to produce Bisphenol-A and includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valve or lines, valves, and flanges or other connectors in VOC service and any other devices or systems required by Subpart VV.

(e) [Reserved]

BPA Process Operations

(f) The BPA process operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate; the date of construction; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
04-050	H-6060	BPA III VENT INCINERATOR	None	None	N/A	N/A
Insignificant Activities [(d)]						
Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
04-074	V-6100	EXTRACTION KO TANK IN BPA I, II, & III	None	None	Less than $40m^3$	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

BPA Flaking, Loading, and Silo Operations and Transfer Operations

(g) (1) The BPA flaking, loading, and silo operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(2) A transfer operation located within the BpaCMPU is a HON MACT (40 CFR 63, Subpart G) Group 2 Transfer Rack identified as emission unit BPA1081TR.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity[(c)]	Date of Construct
None	BPA1081TR	TRANSFER RACK	None	None	<0.65 million liters/yr	2008

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
04-026	V-701A BF	SILO 701A RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-027	V-339-BF	SILO 339 RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-028	V-338-BF	SILO 338 RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-029	V-335-BF	SILO 335 RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-030	V-507B-BF	SILO 507B RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-031	V-507A-BF	RECEIVER FOR BPA III STORAGE SILO V-507A IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-034	V-701B-BF	SILO 701B RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-035	V-701C-BF	SILO 701C RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-039	V-701D-BF	SILO 701D RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-040	V-701E-BF	SILO 701E BIN VENT IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-064	V-5050-NF	SILO V-5050 RECEIVER (F-5052) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-065	V-5060-NF	SILO V-5060 BIN VENT (F-5062) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-066	F-801D-F	NORTHWEST TRUCK & RAIL LOADING STATION RECEIVER IN BPA II	None	Bagfilter	12 tons/hr	N/A
04-069	B-5030 A	BLOWER (B-5030A) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-070	B-5030 B	BLOWER (B-5030B) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-083	RRLSF	SOUTHWEST TRUCK & RAIL LOADING STATION RECEIVER IN BPA II	None	Cyclone & Bagfilter	12 tons/hr	N/A
04-086	V-701A-NF	SILO 701A BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-087	V-701B-NF	SILO 701B BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-088	V-701C-NF	SILO 701C BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-089	V-701D-NF	SILO 701D BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-090	V-701E-NF	SILO 701E BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-091	V-338-NF	SILO 338 BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-092	V-339-NF	SILO 339 BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
04-093	V-335-NF	SILO 335 BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-094	V-507A-NF	SILO 507A BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-095	V-507B-NF	SILO 507B BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-101	TRLSF	EAST TRUCK AND RAIL LOADING STATION DUST COLLECTOR IN BPA I	None	Bagfilter	12 tons/hr	N/A
04-207	B-5030S	BPA III SPARE BLOWER	None	Bagfilter	12 tons/hr	N/A
04-215	SWTRL	SOUTHWEST TRUCK AND RAIL LOADING STATION DUST COLLECTOR IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-217	K-701A	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K-701A) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A
04-218	K-701B	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K701B) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A
04-219	K-701C	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K-701C) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A
04-220/220A	CLN RCU	CLOSED LOOP NITROGEN RAILCAR UNLOADING	None	Bagfilter	4.5 tons/hr	N/A
04-221A/221B	K-701D	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K-701D) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

BPA Area Tanks

(h) Tanks located in the BPA Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
04-072	V-1010	MIBK STORAGE TANK IN BPA III	None	None	57.5 m^3	1985
04-102	V-7066	50% GLYCOL STORAGE TANK IN BPA III	None	None	48 m^3	1985
N/A	V-1040	PHENOL STORAGE IN BPA III	None	None	267 m^3	1985
N/A	V-1060	STORAGE TANK IN BPA III	None	None	973 m^3	1985
N/A	V-1070	STORAGE TANK IN BPA III	None	None	130 m^3	1984
N/A	V-1090	STORAGE TANK IN BPA III	None	None	267 m^3	1985
N/A	V-3030	STORAGE TANK IN BPA III	None	None	32 m^3	1985

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
N/A	V-474	STORAGE TANK IN BPA II	None	None	57.6 m^3	1985

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
04-059	V-7090	HOT OIL STORAGE TANK IN BPA III	None	None	22 m^3	N/A
04-061	V-7091	OIL STORAGE TANK IN BPA III	None	None	3.5 m^3	N/A
04-073	V-1080	ACETONE STORAGE TANK IN BPA III	None	None	487 m^3	N/A
04-080	V-1081	ACETONE EXTRACTION TANK IN BPA III	None	None	17 m^3	N/A
15-006	V-209	VENT TANK V-209 IN BPA PILOT PLANT	C-294 Scrubber	None	3.4 m^3	N/A

[a] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
[b] Equipment is integral to the process operation.
[c] When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
[d] Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

BPA Oil Heating Operations

(i) The BPA oil heating operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
Insignificant Activities [d]						
Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
04-063	H-7090	BPA III HOT OIL HEATER burns natural gas	None	None	4 MMBtu/hr	N/A

[a] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
[b] Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

BPA Heat Exchange System and Area Wastewater

(j) The BPA heat exchange system located within the BpaCMPU is described as the entire recirculating cooling system which is connected to the cooling towers identified as BPA CTC1, BPA CTC2, and BPA CTC3.

(k) The BPA area wastewater is identified as:

(1) HON maintenance wastewater discarded from the BpaCMPU that contains organic HAP's listed in table 9 of 40 CFR 63, Subpart G.

BPA Leak Detection and Repair (LDAR) Components

(l) The BPA chemical manufacturing process unit (BpaCMPU) consists of equipment subject to LDAR. LDAR applies to the BpaCMPU components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems intended to operate in organic hazardous air pollutant service for 300 hours or more during the calendar year and/or volatile organic compound (HAP/VOC) service for any amount of time during the calendar year. In HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight HAP. In VOC service means that a piece either contains or contacts a fluid that is at least 10 percent VOC by weight.

Certain liquid streams in open systems

(m) The BPA chemical manufacturing process unit (BpaCMPU) includes certain liquid streams subject to open system control requirements. These control requirements apply to the BpaCMPU components described as:

(1) A drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flowrate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute; and/or

(2) A tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute.

A.6 LEXAN# Resin [Section G]

A.6.1 LEXAN# Resin, Buildings 14 and 16

LEXAN# Resin Affected Facilities/Sources

(a) The LEXAN# Resin Polycarbonate Production Process Unit (LxrPPPU) subject to 40 CFR 63, Subpart YY is identified by its primary product, which is polycarbonate. The LxrPPPU includes any equipment, such as a pump, compressor, agitator, pressure relief device, sampling collection system, open-ended valve or line, valve, connector, and instrumentation system in organic hazardous air pollutant service that is assembled and connected by pipes or ducts to process raw and/or intermediate materials to manufacture polycarbonate by interfacial polymerization from bisphenols and phosgene. The LxrPPPU includes the reactor in which phosgene is formed and all equipment downstream of the reactor that provides phosgene for the production of polycarbonate; this part of the LxrPPPU is identified as PhosF-972 and the specific requirements of process vent F-972 can be found in Section I.1.

(b) MeCL_Eq identifies the part of the LEXAN# Resin Polycarbonate Production Process Unit subject to 40 CFR 63, Subparts H and I (MeCL_Eq) because it produces polycarbonates and emits methylene chloride. The MeCL_Eq includes only equipment that is in methylene chloride service. In methylene chloride service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of methylene chloride. The LxrPPPU includes the MeCL_Eq equipment, but the MeCL_Eq equipment is regulated under 40 CFR 63, Subpart H and I instead of 40 CFR 63, Subpart YY.

LEXAN# Resin Process Operations

(c) The LEXAN# Resin process operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
05-007	V-723	RESIN II VENT GAS ABSORBER	None	V-723 is a recovery device	35.82 tons/hour	1991
05-008	F-705	RESIN II V-712 BPA RECEIVER	None	Bagfilter	12.11 tons/hour	1984
05-009	F-706	RESIN II V-713 BPA RECEIVER	None	Bagfilter	12.11 tons/hour	1984
05-013	V-519	RESIN I & II VENT GAS ABSORBER	None	V-519 is a recovery device	35.82 tons/hour	1990

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-016	F-741	RESIN II POST DRYER SURGE HOPPER BIN VENT	None	Bagfilter	30 tons/hour	1971

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-004	V-334 BF	TBBPA SILO RECEIVER	None	Bagfilter	7.5 tons/hour	N/A
05-010	F-737	RESIN II WEIGH HOPPER BIN VENT	None	Bagfilter	18.55 tons/hour	N/A
05-011	F-742	RESIN II V-712 BIN VENT	None	Bagfilter	9.28 tons/hour	N/A
05-012	F-743	RESIN II V-713 BIN VENT	None	Bagfilter	9.28 tons/hour	N/A
05-014	F-553	RESIN I BPA RECEIVER FOR V-567	None	Bagfilter	3.76 tons/hour	N/A
05-015	F-515R	RESIN I BPA RECEIVER FOR V-546	None	Bagfilter	3.76 tons/hour	N/A
05-017	V-598	RESIN I V-598 SURGE HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-019	V-508	RESIN I WEIGH HOPPER BIN VENT	None	Bagfilter	7.52 tons/hour	N/A
05-028	F-546	RESIN I V-546 USE BIN VENT	None	Bagfilter	3.76 tons/hour	N/A
05-029	V-567 BF	RESIN I V-567 BPA USE BIN VENT	None	Bagfilter	3.76 tons/hour	N/A
05-030	F-7735	RESIN III INTERMEDIATE SURGE HOPPER BIN VENT	None	Bagfilter	30 tons/hour	N/A
05-031	F-7733	RESIN III POST DRYER SURGE HOPPER BIN VENT	None	Bagfilter	30 tons/hour	N/A
05-041	V-7756A	RESIN IIA AIR STRIP RECEIVER	None	Bagfilter	10 tons/hour	N/A
05-042	V-7756B	RESIN IIB AIR STRIP RECEIVER	None	Bagfilter	10 tons/hour	N/A
05-043	F-7751A	RESIN II A COLUMN HOPPER BIN VENT	None	Bagfilter	10 tons/hour	N/A
05-044	F-7751B	RESIN II B COLUMN HOPPER BIN VENT	None	Bagfilter	10 tons/hour	N/A
05-045	F-7751C	RESIN II C COLUMN HOPPER BIN VENT	None	Bagfilter	10 tons/hour	N/A
05-046	F-5711	RESIN III D DRYER AIR STRIP RECEIVER	None	Bagfilter	10 tons/hour	N/A
05-047	F-5705	RESIN III D COLUMN HOPPER BIN VENT	None	Bagfilter	15 tons/hour	N/A
05-048	V-7756C	RESIN II C DRYER AIR STRIP RECEIVER	None	Bagfilter	10 tons/hour	N/A
05-050	F-5720 BF	RESIN III BPA RECEIVER	None	Bagfilter	9.05 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-051	F-5722 BF	RESIN III BPA USE BIN VENT	None	Bagfilter	9.05 tons/hour	N/A
05-052	F-5724 BF	RESIN III BPA WEIGH HOPPER BIN VENT	None	Bagfilter	9.05 tons/hour	N/A
05-053	F-5761A	RESIN I A V-5761A COLUMN HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-054	F-5761B	RESIN I B V-5761B COLUMN HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-055	F-5761C	RESIN I C V-5761C COLUMN HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-056	F-5776	RESIN I SPECIALS DRYER SCRUBBER	None	Peabody Scrubber	7.5 tons/hour	N/A
05-057	F-5778	RESIN I V-5770 SURGE HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-058	F-5870	RESIN I SURGE HOPPER RHEOMETER FOR F-5870	None	Vac-U-Max Filter	0.05 tons/hour	N/A
05-059	F-5871	RESIN I SURGE HOPPER RHEOMETER FOR F-5871	None	Vac-U-Max Filter	0.05 tons/hour	N/A
05-060	Z-5873	RESIN I FEED SCRUBBER	Scrubber*	N/A	7.5 tons/hour	N/A
05-061	F-506A	DDDA RECEIVER FOR SILO V-506A	None	Bagfilter	7.5 tons/hour	N/A
05-062	F-506	DDDA RECEIVER	None	Bagfilter	7.5 tons/hour	N/A
05-073	F7737	RESIN III POST DRYER FEED RECEIVER FOR V-7731	None	Bagfilter	30 tons/hour	N/A
05-074	F-7736	RESIN III POST DRYER FEED RECEIVER FOR V-749	None	Bagfilter	30 tons/hour	N/A
05-075	V-506A	DDDA SILO V-506A UNFILTERED VENT	None	None	7.5 tons/hour	N/A
05-150	WPDR1	RESIN I PEABODY SCRUBBER	None	Peabody Scrubber	7.5 tons/hour	N/A
05-151	WPDR2	RESIN II PEABODY SCRUBBER	None	Peabody Scrubber	30 tons/hour	N/A
05-152	WPDR3	RESIN III PEABODY SCRUBBER	None	Peabody Scrubber	15 tons/hour	N/A
05-154	FDFS	RESIN III FLASH DRYER FAN SCRUBBER	None	Scrubber	15 tons/hour	N/A
05-156	F-5728	SUPERSACK UNLOADER UNIT	None	Bagfilter	7.5 tons/hour	N/A
05-157	F-5723	USE BIN FILTER	None	Bagfilter	7.5 tons/hour	N/A
05-158	CLN TRANS	CLN TRANSFER SYSTEM	None	Bagfilter	7.5 tons/hour	N/A
05-159	F-5786	HI HEAT SURGE BIN SYSTEM	None	Bagfilter	7.5 tons/hour	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* There are no control requirements required for the scrubber associated with stack/vent ID 05-060 because uncontrolled emissions/hour are only about 40 percent of the allowable emissions for this emission unit.

LEXAN# Resin Area Tanks

(d) Tanks located in the LEXAN# Resin Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum tank volume capacity, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-005	V-706	V-706 STORAGE TANK WITH SCRUBBER*	None	None	22.7 m^3	1970
N/A	V-5502	SOLUTION BLENDING TANK	None	None	75.7 m^3	N/A
N/A	V-5503	FRESH METHYLENE CHLORIDE STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-5504	RECYCLE METHYLENE CHLORIDE STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-5510	SOLUTION BLENDING STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-711A	RECYCLE SOLVENT STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-711B	RECYCLE SOLVENT STORAGE TANK	None	None	75.7 m^3	N/A

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-040	V-5509	TEA STORAGE TANK WITH VENT SCRUBBER*	None	None	22.9 m^3	N/A
05-049	V-5780	PTC TANK	None	None	34.1 m^3	N/A
05-071	V-5506	PCP STORAGE TANK WITH VENT SCRUBBER*	None	None	69.7 m^3	N/A
05-072	V5508	DAC STORAGE TANK WITH VENT SCRUBBER*	None	None	69.8 m^3	N/A
05-155	V-5784	RESORCINOL TANK V-5784 WITH VENT SCRUBBER*	None	None	88.9 m^3	N/A
05-160	F-5787	HIGH HEAT MIXING TANK	None	None	22.3 m^3	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Scrubber not required by any air regulation requirements.

LEXAN# Resin Waste

(e) The LEXAN# Resin area waste is identified below as:

(1) The process wastewater streams discarded from the LxrPPPU:

(A) Contain a total annual average concentration of organic HAP's listed in table 9 of 40 CFR 63, Subpart G less than 10,000 parts per million by weight at any flow rate; or

(B) Contain a total annual average concentration of organic HAP's listed in table 9 of 40 CFR 63, Subpart G less than 1,000 parts per million by weight at an annual average flow rate greater than or equal to 10 liters per minute; and

(2) GMACT Maintenance Wastewater discarded from the LxrPPPU and contains organic HAP's listed in table 9 of 40 CFR 63, Subpart G. Some of the GMACT Maintenance Wastewater is associated with the Phosgene production unit located in Building 6 which is considered part of the polycarbonate production process unit identified as LxrPPPU.

P&ID No.	Wastewater Stream ID[(a)]	Wastewater Stream Unit Description
5-F-12G	2"-DR-A-512E-007	TEA Storage Tank Vent Scrubber F-5509 Drain
5-F-28A	4"-WNB-Yd-528A-63	Resin I Non-Brine Discharge to WWTP
5-F-28A	4"-P	Analyzer Sample Point for Resin I Non-Brine Discharge to WWTP
5-F-28A	½"-WNB-P-528A-68	Sample Point for Resin I Non-Brine Discharge to WWTP (Hot Sample)
5-F-28A	½"-WNB-Qt-528A-69	Sample Point for Resin I Non-Brine Discharge to WWTP (Cooled Sample)
5-F-28C	1/2"-BRP-Qt-528C-69	Brine Sample Point
5-F-28C	1/2"-BRP-Qt-528C-70	Brine Sample Point
5-F-28D	6"-BRP-D-528D-04	Brine to Brine Recovery Plant
5-F-50B	1"-DR-P-550B-70	S.D. Powder Scrubber F-5776 Vent Humidifier
5-F-50B	1 1/2"-PV-P-550B-77	S.D. Powder Scrubber F-5776 Water Seal Drain
5-F-50B	3"-MWR-P-550B-19	S.D Powder Scrubber F-5776 Level Control Drain
5-F-101A	1/2"-NAOH-Qt-5101A-024	Caustic Sample Loop Off of RI Primary Caustic Scrubber V-5532 and V-5533
7-F-26	1"-WDI-P-726-43	Post Dryer Powder Scrubber F-733 Level Control Drain
7-F-101A	½"-NAOH-P-7101A-027	Caustic Sample Loop Off of RII Primary Caustic Scrubber V-7721 and V-7722
7-F-116A	6"-WNB-P-7116A-34	RII Non Brine Discharge to WWTP
7-F-116A	½"-WNB-P-7116A-60	Conductivity Sample Point for Resin II Non-Brine Discharge to WWTP
7-F-116A	4"-P	Analyzer Sample Point for Resin II Non-Brine Discharge to WWTP
7-F-116A	½"-WNB-P-7116A-60	Sample Point for Resin II Non-Brine Discharge to WWTP
7-F-142	1 ½"-MWS-P-7142-58	Post Dryer Powder Scrubber F-7734 Level Control Drain
7-F-162	1 ½"-WNB-P-7162-16-HW	Flash Dryer Powder Scrubber F-7806B Level Control Drain
5-F-26	1"-WDI-P-526-65	Post Dryer Powder Scrubber F-590 Level Control Drain
900-F-73C	1"-MWS-A-73C-028	Neutralizer Tank V-951 (Aqueous Phase)

P&ID No.	Wastewater Stream ID[(a)]	Wastewater Stream Unit Description
N/A	N/A	GMACT MAINTENANCE WASTEWATER

[(a)] Each wastewater stream is identified with an affiliated P&ID number and wastewater stream unit description.

LEXAN# Resin Leak Detection and Repair (LDAR) Components

(f) The LEXAN# Resin Polycarbonate Production Process Unit (LxrPPPU) consists of equipment subject to LDAR. LDAR applies to:

(1) The collection of all LxrPPPU components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, and instrumentation systems intended to operate in organic hazardous air pollutant service for 300 hours or more during the calendar year. In organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight HAP. Some of this equipment is routed through a closed vent system, identified as LxrCVS1 and into an emergency vent scrubber, identified as LxrEVS or through a closed vent system, identified as PhosCVS1 and into an emergency vent scrubber, identified as PhosC-964.

(2) The collection of all MeCL_Eq components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems that are in methylene chloride service. In methylene chloride service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of methylene chloride. For clarification purposes, MeCL_Eq components are part of the LxrPPPU, but are regulated under 40 CFR 63, Subpart H and I instead of 40 CFR 63, Subpart YY.

Certain liquid streams in open systems

(g) The LEXAN# Resin Polycarbonate Production Process Unit (LxrPPPU) includes certain liquid streams subject to open system control requirements. These control requirements apply to the LEXAN# Resin PPPU components described as:

(1) A drain, drain hub, manhole (including sumps and other points of access to a conveyance system), lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flow rate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute; and/or

(2) A tank with capacity equal to or greater than 38 cubic meters that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute.

A.7 Brine Recovery [Section H]

A.7.1 Brine Recovery, Building 32

Brine Recovery Operations

(a) The Brine Recovery operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
06-008	V-70-4C	HCL SYNTHESIS SCRUBBER TOWER VENT(V70-10)*	None	None	N/A	N/A

Insignificant Activities[(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
06-006	V70-2	HCL TANK TRUCK TRANSFER AND STORAGE VENT SCRUBBER (V70-2)*	None	None	N/A	N/A
06-010	V20-5	BRINE SURGE TANK (V20-5)	None	None	N/A	N/A
06-011	ACID SUMP	ACID SUMP	None	None	N/A	N/A
06-012	V20-7	ACID BRINE STRIPPER (V20-7)	None	None	N/A	N/A
06-035	V-53-1	ENCLOSURE VENTILATION SCRUBBER (EVS) (V53-1)**	None	None	N/A	N/A
06-055	V20-21	RAW BRINE STORAGE TANK (V20-21)	None	None	N/A	N/A
06-058	V70-3	HCL RAILCAR LOADING STATION WITH SCRUBBER (V70-3)*	None	None	N/A	N/A
06-061	V20-17A	NORTH COOLING POND (V20-17A)	None	None	N/A	N/A
06-062	V20-17B	SOUTH COOLING POND (V20-17B)	None	None	N/A	N/A
06-064	V20-15B	ACIDIFICATION/DEGASSING TANK (V20-15B)	None	None	N/A	N/A
06-067	V53-2A	ENCLOSURE VENTILATION SCRUBBER (EVS) CIRCULATION TANK (V53-2A)	None	None	N/A	N/A
06-068	V53-2B	ENCLOSURE VENTILATION SCRUBBER (EVS) CIRCULATION TANK (V53-2B)	None	None	N/A	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Scrubber controls hydrogen chloride fumes and is not required by any air regulation requirements.

** V-53-1 is a scrubber used to contain and destroy fugitive or accidental releases of chlorine gas that may occur inside the chlorine enclosure area of the brine recovery operations. This scrubber is a safety system integral to process operations and is not considered a control or recovery device.

A.8 Phosgene [Section I]

A.8.1 Phosgene, Building 6

Phosgene Affected Facilities/Sources

(a) The Phosgene Reaction, Purification, and Transfer Operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
08-001	F-972	TAIL GAS SEPARATOR (WITH FLARE H-961)*	One of three scrubber systems: (C-962 and C-963) OR (C-966 and C-967) OR C-965	None	N/A	1979
08-004	F-902	CARBON SYSTEM BLOWER TRANSFER CYCLONE (K-909)	None	Bagfilter	2.0 tons/hr	N/A
08-007	V-967	EVS CAUSTIC SCRUBBER VENT C964	Scrubber C-964	None	N/A	N/A

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
08-003	F-901	CARBON SYSTEM BLOWER RAILCAR UNLOADING (K-901)	None	Bagfilter	2.0 tons/hr	N/A
08-005	V-969	VENT SCRUBBER RECIRCULATION TANK (V-969)	None	None	N/A	N/A
08-006	V-971A	CAUSTIC MAKE-UP TANK (V-971A)	None	None	N/A	N/A
08-008	V-951	CARBON TET. NEUTRALIZATION AND DRUM-OFF STATION (V-951)	None	None	N/A	N/A

[a] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
[b] Equipment is integral to the process operation.
[c] When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* H-961 is used to control CO emissions in the gas stream exiting the tail gas scrubber system. There are no regulatory requirements for this flare.

Phosgene Carbon Monoxide Generators and COS (Carbonyl Sulfide) Stream

(b) The Phosgene Carbon Monoxide Generators consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[a]

Stack / Vent I.D	Emission Unit*	Emission Unit Description	Air Pollution Control Devices**	Integral Devices (b) ***	Maximum Capacity[c]	Date of Construct
08-010	COG1	CO GENERATOR NO. 1	COS Vent Oxidizer (08-706) OR COS Flare (08-707)	Carbon Adsorbers V-948, V-949, V-050A, V-951A, V-9020, V-9021	0.17 tons/hr	N/A
08-011	COG2	CO GENERATOR NO. 2			0.17 tons/hr	N/A
08-012	COG3	CO GENERATOR NO. 3			0.17 tons/hr	N/A
08-013	COG4	CO GENERATOR NO. 4			0.17 tons/hr	N/A
08-014	COG5	CO GENERATOR NO. 5			0.17 tons/hr	N/A
08-015	COG6	CO GENERATOR NO. 6			0.17 tons/hr	N/A
08-016	COG7	CO GENERATOR NO. 7			0.17 tons/hr	N/A
08-017	COG8	CO GENERATOR NO. 8			0.17 tons/hr	N/A
08-018	COG9	CO GENERATOR NO. 9			0.17 tons/hr	N/A
08-019	COG10	CO GENERATOR NO. 10			0.17 tons/hr	N/A
08-020	COG11	CO GENERATOR NO. 11			0.17 tons/hr	N/A
08-021	COG12	CO GENERATOR NO. 12			0.17 tons/hr	N/A
08-022	COG13	CO GENERATOR NO. 13			0.17 tons/hr	N/A
08-023	COG14	CO GENERATOR NO. 14			0.17 tons/hr	N/A
08-024	COG15	CO GENERATOR NO. 15			0.17 tons/hr	N/A
08-025	COG16	CO GENERATOR NO. 16			0.17 tons/hr	N/A
08-708	F-961A	F-964A CO BAGHOUSE	None	None	5.78 tons/hr	2006
08-709	F-961B	F-964B CO BAGHOUSE	None	None	5.78 tons/hr	2006
08-710	V-961A	F-961A BAGHOUSE RECEIVER	None	None	N/A	2006
08-711	V-961B	F-961B BAGHOUSE RECEIVER	None	None	N/A	2006

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

* The 16 CO generators operate in a continuous mode and the CO produced by the generators is normally routed through the purification system and into the phosgene reactor. Each of the 16 generators has a stack/vent that is only used during startup, shutdown, and malfunction events.

** BEFORE Shutdown of E BOILER and BW-BOILER -In addition to having the option to use the COS Vent Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either the E BOILER, BW BOILER, and/or R BOILER. These boilers are described in Section K of this permit. The COS Flare (08-707) only serves as a back-up to the COS Vent Oxidizer (08-706) or during safety interlock of the system.

** AFTER Shutdown of E BOILER and BW-BOILER - In addition to having the option to use the COS Vent Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to R BOILER. The boiler is described in Section K of this permit. The COS Flare (08-707) only serves as the back-up to the COS Vent Oxidizer (08-706) or during safety interlock of the system.

*** These carbon adsorbers purify the carbon monoxide as it flows from the CO generators to the phosgene reactor. Without the purification, the carbon monoxide quality is not adequate to produce phosgene that is suitable for use in polycarbonate production. Downstream of the adsorbers is a chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide.

Phosgene Heat Exchange System and Area Waste

(c) The Phosgene heat exchange system includes cooling towers identified as PHG CTC1, PHG CTC2, PHG CTC3, PHG CTC4, PHG CTC5, PHG CTC6, PHG CTC7, PHG CTC8.

(d) [Reserved]

A.9 LEXAN# Finishing [Section J]

A.9.1 LEXAN# Finishing, Building 13

LEXAN# Finishing Operations

(a) The LEXAN# Finishing operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-148	SILO 67	RESIN SILO 67	None	Filter	32.5 tons/hour	N/A
07-149	SILO 68	RESIN SILO 68	None	Filter	32.5 tons/hour	N/A
07-156	SILO 69	RESIN SILO 69	None	Filter	32.5 tons/hour	N/A
07-157	SILO 70	RESIN SILO 70	None	Filter	32.5 tons/hour	N/A
07-188	SILO 71	RESIN SILO 71	None	Filter	32.5 tons/hour	1995
Insignificant Activities[d]						
07-001	CMEX	COLOR MATCHING EXTRUDER	None	None	less than 100 lb/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-002	MM4	MOLDING MACHINE #4	None	None	less than 100 lb/hr	N/A
07-002	MM5	MOLDING MACHINE #5	None	None	less than 100 lb/hr	N/A
07-002	MM6	MOLDING MACHINE #6	None	None	less than 100 lb/hr	N/A
07-011	QAFOH	QA FLAME OUT HOOD	None	None	less than 100 lb/hr	N/A
07-012	QAAH	QA ASHING HOOD	None	None	less than 100 lb/hr	N/A
07-013	QA SP HOOD	QA SAMPLE PREPARATION HOOD	None	None	less than 100 lb/hr	N/A
07-015	L-20 PB	LINE 20 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-016	L-21 PB	LINE 21 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	2.5 tons/hour	N/A
07-017	M&N DUST	M & N VERTIMIXERS BAGHOUSE	None	Filter	0.63 tons/hour	N/A
07-018	L-22 PB	LINE 22 POWDER BIN FILTER	None	Filter	2.30 tons/hour	N/A
07-019	L-23 PB	LINE 23 POWDER BIN FILTER	None	Filter	1.13 tons/hour	N/A
07-020	L-24 PB	LINE 24 POWDER BIN FILTER	None	Filter	2.48 tons/hour	N/A
07-022	L-25 PB	LINE 25 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A
07-023	SP1-BF	POT #1 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-024	SPA-BF	POT A BAG HOUSE	None	Filter	7.5 tons/hour	N/A
07-025	L-26PR	LINE 26 POWDER BIN FILTER	None	Filter	1.75 tons/hour	N/A
07-026	L-27PB	LINE 27 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A
07-027	L-28PB	LINE 28 POWDER BIN FILTER	None	Filter	4.25 tons/hour	N/A
07-028	L-29PB	LINE 29 POWDER BIN FILTER	None	Filter	4.25 tons/hour	N/A
07-029	SPB-BF	POT B BAG HOUSE	None	Filter	7.5 tons/hour	N/A
07-030	L-30PB	LINE 30 POWDER BIN FILTER	None	Filter	3.25 tons/hour	N/A
07-031	L-31PB	LINE 31 POWDER BIN FILTER	None	Filter	3.25 tons/hour	N/A
07-032	SILO 57 RH	RESIN SILO 57	None	Filter	32.5 tons/hour	N/A
07-033	SILO 58 RH	RESIN SILO 58	None	Filter	32.5 tons/hour	N/A
07-034	L-28 RH	LINE #28 ROOF HOPPER BAG HOUSE	None	Filter	4.25 tons/hour	N/A
07-035	L-27 RH	LINE #27 ROOF HOPPER BAG HOUSE	None	Filter	4.25 tons/hour	N/A
07-036	L-26 RH	LINE #26 ROOF HOPPER BAG HOUSE	None	Filter	1.75 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-037	L-25 RH	LINE #25 ROOF HOPPER BAG HOUSE	None	Filter	2.75 tons/hour	N/A
07-038	L-24 RH	LINE #24 ROOF HOPPER BAG HOUSE	None	Filter	2.75 tons/hour	N/A
07-039	L-23 RH	LINE #23 ROOF HOPPER BAG HOUSE	None	Filter	1.25 tons/hour	N/A
07-040	L-22 RH	LINE #22 ROOF HOPPER BAG HOUSE	None	Filter	2.5 tons/hour	N/A
07-041	L-21 RH	LINE #21 ROOF HOPPER BAG HOUSE	None	Filter	2.5 tons/hour	N/A
07-042	L-20 RH	LINE #20 ROOF HOPPER BAG HOUSE	None	Filter	1.75 tons/hour	N/A
07-043	SILO 59RH	RESIN SILO 59	None	Filter	32.5 tons/hour	N/A
07-044	SILO 60 RH	RESIN SILO 60	None	Filter	32.5 tons/hour	N/A
07-045	SILO 61 RH	RESIN SILO 61	None	Filter	32.5 tons/hour	N/A
07-046	SILO 62 RH	RESIN SILO 62	None	Filter	32.5 tons/hour	N/A
07-049	L-10 BV	LINE #10 ROOF HOPPER BAGHOUSE	None	Filter	1.25 tons/hour	N/A
07-050	L-11 BV	LINE #11 ROOF HOPPER BAGHOUSE	None	Filter	1.75 tons/hour	N/A
07-051	L-12 BV	LINE #12 ROOF HOPPER BAGHOUSE	None	Filter	1.25 tons/hour	N/A
07-052	L-13 BV	LINE #13 ROOF HOPPER BAGHOUSE	None	Filter	0.55 tons/hour	N/A
07-053	L-14 BV	LINE #14 ROOF HOPPER BAGHOUSE	None	Filter	1.5 tons/hour	N/A
07-054	L16ED	LINE 16 EXTRUDER, DIE AND VACUUM VENT	None	N/A	0.75 tons/hour	N/A
07-055	L-15 RH	LINE #15 ROOF HOPPER BAGHOUSE	None	Filter	1.5 tons/hour	N/A
07-056	L-16 RH	LINE #16 ROOF HOPPER BAGHOUSE	None	Filter	0.75 tons/hour	N/A
07-057	L-17 RH	LINE #17 ROOF HOPPER BAGHOUSE	None	Filter	0.75 tons/hour	N/A
07-059	L13ED	LINE 13 EXTRUDER AND DIE VENT	None	None	0.55 tons/hour	N/A
07-060	L17ED	LINE 17 EXTRUDER, DIE AND VACUUM VENT	None	None	0.75 tons/hour	N/A
07-061	L15ED	LINE 15 EXTRUDER AND DIE VENT	None	None	1.5 tons/hour	N/A
07-062	L14ED	LINE 14 EXTRUDER AND DIE VENT	None	None	1.5 tons/hour	N/A
07-063	L27ED	LINE 27 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-064	L10 ED	LINE 10 EXTRUDER AND DIE VENT	None	None	1.25 tons/hour	N/A
07-065	L11ED	LINE 11 EXTRUDER AND DIE VENT	None	None	1.75 tons/hour	N/A
07-066	L12ED	LINE 12 EXTRUDER AND DIE VENT	None	None	1.25 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-067	L26ED	LINE 26 EXTRUDER AND DIE VENT	None	None	1.75 tons/hour	N/A
07-069	L24ED	LINES 23, 24 & 25 EXTRUDER, DIE AND VACUUM VENTS THROUGH HEAF #2 (SOUTH)	HEAF1 or HEAF2	None	N/A	N/A
07-070	L23ED	LINES 23, 24 & 25 EXTRUDER, DIE AND VACUUM VENTS THROUGH HEAF #1 (NORTH)	HEAF1 or HEAF2	None	N/A	N/A
07-070	L25ED	LINE 25 EXTRUDER AND DIE VENT	HEAF1 or HEAF2	None	N/A	N/A
07-071	L22ED	LINE 22 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-072	L21ED	LINE 21 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-073	L20ED	LINE 20 EXTRUDER AND DIE VENT	None	None	1.75 tons/hour	N/A
07-075	PBAGGER 1	POWDER BAGGER #1 ROOF HOPPER RECEIVER	None	Filter	7.5 tons/hour	N/A
07-076	DFOST	DIESEL FUEL OIL STORAGE TANK	None	None	N/A	N/A
07-079	PDC-C	PACKAGING DUST COLLECTOR C BAG HOUSE	None	Filter	0.55 tons/hour	N/A
07-080	PDC-D	PACKAGING DUST COLLECTOR D BAG HOUSE	None	Filter	0.55 tons/hour	N/A
07-086	REC FIL E	RECYCLE BAG HOUSE BLOWER E	None	Filter	8.35 tons/hour	N/A
07-087	REC FIL F	RECYCLE BAG HOUSE BLOWER F	None	Filter	8.35 tons/hour	N/A
07-092	L10EVP	Line 10 Extruder Vacuum Pump	None	None	1.25 tons/hour	N/A
07-092	L11EVP	Line 11 Extruder Vacuum Pump	None	None	1.75 tons/hour	N/A
07-092	L15EVP	Line 15 Extruder Vacuum Pump	None	None	1.5 tons/hour	N/A
07-092	L17EVP	LINE 17 EXTRUDER VACUUM PUMP	None	None	0.75 tons/hour	N/A
07-094	SILO 63	RESIN SILO 63	None	Filter	32.5 tons/hour	N/A
07-095	SILO 64	RESIN SILO 64	None	Filter	32.5 tons/hour	N/A
07-096	SILO 65	RESIN SILO 65	None	Filter	32.5 tons/hour	N/A
07-097	SILO 66	RESIN SILO 66	None	Filter	32.5 tons/hour	N/A
07-098	TRUCK FIL	BULK POWDER TRUCK LOADING STATION #1	None	Filter	7.5 tons/hour	N/A
07-099	SP2-BF	POT #2 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-100	SP3-BF	POT #3 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-101	L28ED	LINE 28 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-104	VPL-29	LINE 29 VACUUM PUMP	None	None	4.25 tons/hour	N/A
07-104	VPL-30	LINE 30 VACUUM PUMP	None	None	3.25 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-104	VPL-31	LINE 31 VACUUM PUMP	None	None	3.25 tons/hour	N/A
07-105	L29ED	LINE 29 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-106	L30ED	LINE 30 EXTRUDER AND DIE VENT	None	None	3.25 tons/hour	N/A
07-107	L31ED	LINE 31 EXTRUDER AND DIE VENT	None	None	3.25 tons/hour	N/A
07-108	L-29 RH	LINE #29 ROOF HOPPER BAG HOUSE	None	Filter	4.25 tons/hour	N/A
07-109	L-30 RH	LINE #30 ROOF HOPPER BAG HOUSE	None	Filter	3.25 tons/hour	N/A
07-110	L-31 RH	LINE #31 ROOF HOPPER BAG HOUSE	None	Filter	3.25 tons/hour	N/A
07-115	CVSA	CENTRAL VACUUM SYSTEM A BAG HOUSE	None	Filter	1.25 tons/hour	N/A
07-116	CVSB	CENTRAL VACUUM SYSTEM B BAG HOUSE	None	Filter	1.25 tons/hour	N/A
07-117	REC FIL G	RECYCLE BAG HOUSE BLOWER G	None	Filter	8.35 tons/hour	N/A
07-119	SAVS	PAD VACUUM BAG HOUSE	None	Filter	0.25 tons/hour	N/A
07-120	DC-6	CPF ROOF HOPPERS BAG HOUSE (C1, C2, C7 & C10)	None	Cartridge Filter and Cyclones	1.5 tons/hour	N/A
07-121	20-S-C9-02	LINES C7, C20 & C22 ROTOCLONE	None	None	7.2 tons/hour	N/A
07-122	10-S-10NPI	C3, C5 NPI EXTRUDER FEED HOPPERS	None	Filter	0.9 tons/hour	N/A
07-123	C14/16 ROT	LINES C14/16 BLENDER ROTOCLONE	None	None	3.75 tons/hour	N/A
07-126	LC2D	LINE C2 EXTRUDER AND DIE VENT	None	None	0.7 tons/hour	N/A
07-127	LC1D	LINE C1 & C3 EXTRUDER AND DIE VENT	None	None	0.9 tons/hour	N/A
07-127	LC3D	LINE C3 EXTRUDER AND DIE VENT	None	None	0.9 tons/hour	N/A
07-128	LC7D	LINE C7 EXTRUDER AND DIE VENT	None	None	0.45 tons/hour	N/A
07-130	LC14D	LINE C14 EXTRUDER AND DIE VENT	None	None	1.25 tons/hour	N/A
07-131	LC14V	LINE C14 CPF VACUUM	None	None	1.25 tons/hour	N/A
07-131	LC16V	LINE C16 CPF VACUUM	None	None	2.5 tons/hour	N/A
07-131	LC18V	LINE C18 CPF VACUUM	None	None	2.5 tons/hour	N/A
07-132	WCV	CPF CENTRAL VACUUM SYSTEM BAG HOUSES	None	None	1.25 tons/hour	N/A
07-134	20-M-C1-01	CPF ROTOCLONE SYSTEM FOR BLENDER C1	None	CPF OS ROT	less than 100 lb/hr	N/A
07-134	20-M-C10-1	CPF ROTOCLONE SYSTEM FOR BLENDER C10	None	CPF ES ROT	less than 100 lb/hr	N/A
07-134	20-M-C2-01	CPF ROTOCLONE SYSTEM FOR BLENDER C2	None	CPF ES ROT	less than 100 lb/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-134	20-M-C3-01	CPF ROTOCLONE SYSTEM FOR BLENDER C3	None	CPF OS ROT	less than 100 lb/hr	N/A
07-134	20-M-C7-01	CPF ROTOCLONE SYSTEM FOR BLENDER C7	None	CPF OS ROT	less than 100 lb/hr	N/A
07-134	20-M-C8-01	CPF ROTOCLONE SYSTEM FOR BLENDER C8	None	CPF ES ROT	less than 100 lb/hr	N/A
07-135	VTBC14	LINE C14 & C16 VACUUM RECEIVER BLOWER	None	Filter	3.75 tons/hour	N/A
07-136	CMM1	CPF MOLDING MACHINE #1	None	None	less than 100 lb/hr	N/A
07-136	CMM2	CPF MOLDING MACHINE #2	None	None	less than 100 lb/hr	N/A
07-136	CMM3	CPF MOLDING MACHINE #3	None	None	less than 100 lb/hr	N/A
07-137	BVC1	LINES C1 & C7 VACUUM VENT	None	None	0.75 tons/hour	N/A
07-137	BVC3	CPF BARREL VACUUM VENT C3	None	None	0.3 tons/hour	N/A
07-137	BVC5	CPF BARREL VACUUM VENT C5	None	None	0.45 tons/hour	N/A
07-137	BVC7	CPF BARREL VACUUM VENT C7	None	None	0.45 tons/hour	N/A
07-139	BVC2	CPF BARREL VACUUM VENT C2	None	None	0.7 tons/hour	N/A
07-150	L-14PPC	LINE #14 PPC ROOF HOPPER BAG HOUSE	None	Filter	1.5 tons/hour	N/A
07-153	VDCS	BINS 51-56 AND K & L VERT DUST COLLECTOR	None	None	12.5 tons/hour	N/A
07-154	FGHJ VDC	F, G, H & J VERT DUST COLLECTOR	None	None	12.5 tons/hour	N/A
07-159	LC16D	LINE C16 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-159	LC18D	LINE C18 DIE VENT	None	None	2.5 tons/hour	N/A
07-161	SS1 BV	CO581 SAN SILO BAG HOUSE	None	Filter	1.35 tons/hour	N/A
07-162	SAN-RH	CO581 SAN ROOF HOPPER RECEIVER	None	Filter	1.35 tons/hour	N/A
07-163	ASC HCF	LINE 23, 24 & 25 ACRYLO SAN CO556 HOPPER CARTRIDGE FILTER	None	Filter	0.75 tons/hour	N/A
07-164	L23/24 SH	CO581 SAN ROOF HOPPER CARTRIDGE FILTER	None	Filter	1.35 tons/hour	N/A
07-166	HRG UL DC	SAN & HRG UNLOADING RECEIVER	None	Filter	3.5 tons/hour	N/A
07-167	HRG S1C	C29292 HRG SILO RECEIVER	None	Filter	2 tons/hour	N/A
07-168	HRG S2C	C29170 HRG SILO RECEIVER	None	Filter	2 tons/hour	N/A
07-169	HRG SILO 1	C29292 HRG SILO CONSERVATION VENT	None	None	2 tons/hour	N/A
07-170	HRG SILO 2	C29170 HRG SILO CONSERVATION VENT	None	None	2 tons/hour	N/A
07-171	HRG S1 DRV	C29292 HRG SILO ROTARY VALVE VENT	None	None	2 tons/hour	N/A
07-172	HRG S2 DRV	C29170 HRG SILO ROTARY VALVE VENT	None	None	2 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-173	HRG L23/24	LINES 23 & 24 HRG ROOF HOPPER RECEIVER	None	Filter	2.1 tons/hour	N/A
07-175	HRG 23/241	LINES 23 & 24 HRG ROOF HOPPER CONSERVATION VENT	None	N/A	2.1 tons/hour	N/A
07-176	HRG 23/242	LINES 23 & 24 HRG ROOF HOPPER CONSERVATION VENT	None	N/A	2.1 tons/hour	N/A
07-177	RDPST	RDP STORAGE TANK	None	None	N/A	N/A
07-180	RL23	LINE 23 RECYCLE HOPPER CARTRIDGE FILTER	None	Filter	1.25 tons/hour	N/A
07-182	RL24	LINE 24 RECYCLE HOPPER CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A
07-183	L30AF-BV	L30 ADDITIVE FEEDER BIN	None	L30 ROTO	less than 100 lb/hr	N/A
07-183	L30FT BV	CART. FILTER 13-PA037	None	L30 ROTO	less than 100 lb/hr	N/A
07-185	C3EVP	LINE C3 VACUUM VENT	None	None	0.3 tons/hour	N/A
07-186	C5EVP	LINE C5 VACUUM VENT	None	None	0.45 tons/hour	N/A
07-192	RPDH	BROWN BAG POWDER BAGGING DUST COLLECTOR	None	Filter	0.65 tons/hour	N/A
07-194	RGT/CRG	REGRINDER C, D & E AND METAL DETECTION BAG HOUSE	None	Filter	25 tons/hour	N/A
07-195	CMH	COLOR MATCHING HOPPER BAG HOUSE	None	Filter	less than 100 lb/hr	N/A
07-197	BCB	STARTUP/RECYCLE DUST COLLECTOR SPARE BLOWER	None	Filter	6 tons/hour	N/A
07-199	L25/26XTH	LINES 25 & 26 XT HOPPER	None	Filter	4.5 tons/hour	N/A
07-200	L30/31B2RH	LINE #30 & 31 ROOF HOPPER #2 BAG HOUSE	None	Filter	6.5 tons/hour	N/A
07-201	L28/29B2RH	LINE #28 & 29 ROOF HOPPER #2 BAG HOUSE	None	Filter	8.5 tons/hour	N/A
07-202	L30CDC	LINE 30 STARTUP/RECYCLE BAG HOUSE	None	Filter	3.25 tons/hour	N/A
07-204	10-S-06	CPF RESIN BINS 1 THRU 5 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-205	VTBC16	LINE C16 & C18 VACUUM RECEIVER	None	Filter	6 tons/hour	N/A
07-206	BF-BPTL	BULK POWDER TRUCK LOADING STATION #2	None	None	12.5 tons/hour	N/A
07-207	MM1	MOLDING MACHINES 7, 8 & 9	None	None	less than 100 lb/hr	N/A
07-208	EXT7	MOLDING MACHINE #10. MINI EXTRUDERS #7 & #8.	None	None	less than 100 lb/hr	N/A
07-208	EXT8	EXTRUDER 10 LAB SCALE EXTRUDER	None	None	less than 100 lb/hr	N/A
07-250	DC0101F	LINE 25 HRG ROOF HOPPER CONSERVATION VENT	None	None	0.83 tons/hour	N/A
07-251	L25MH	LINES 23, 24 & 25 SAN C8707 ROOF HOPPER CARTRIDGE FILTER	None	Filter	1.66 tons/hour	N/A
07-252	SGH	LINES 23, 24 & 25 SAN GEL HOPPER CARTRIDGE FILTER	None	Filter	1.66 tons/hour	N/A
07-255	L25RH	LINE 25 RECYCLE HOPPER CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-256	HSH1	LINE 25 ROTOCLONE	None	L25 ROTO	less than 100 lb/hr	N/A
07-256	HSH2	L25 CONCENTRATE FEEDER	None	L25 ROTO	less than 100 lb/hr	N/A
07-256	L25 FTC	L25 FEED THROAT HOPPER V-05-01	None	L25 ROTO	less than 100 lb/hr	N/A
07-256	L25 HF	L25 HRG FEEDER LW-04-04	None	L25 HRG FC L25 ROTO	less than 100 lb/hr	N/A
07-264	L25-HRG2	LINE 25 HRG ROOF HOPPER CONSERVATION VENT	None	None	0.83 tons/hour	N/A
07-266	C20-DHV	LINE C20 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-267	C20VP-Z5/7	LINE C20 VACUUM VENT	None	None	2.5 tons/hour	N/A
07-268	C20VACTB	LINES C20 & C22 RESIN RECEIVER BAG HOUSE	None	Filter	6.75 tons/hour	N/A
07-270	BSANSBV	C29355 SAN SILO CONSERVATION VENT	None	None	6.75 tons/hour	N/A
07-271	BSANSILODC	C29355 SAN SILO RECEIVER	None	Filter	6.75 tons/hour	N/A
07-272	BSAN-HV	C29355 SAN ROOF HOPPER CONSERVATION VENT	None	None	6.75 tons/hour	N/A
07-273	BSAN-HDC	C29355 SAN ROOF HOPPER RECEIVER	None	None	6.75 tons/hour	N/A
07-274	HRGL25DC	LINE 25 ROOF HOPPER RECEIVER	None	None	2.75 tons/hour	N/A
07-275	L23-25SHV	C29355 SAN SILO ROTARY VALVE VENT FILTER	None	None	6.75 tons/hour	N/A
07-276	CPF OQ	CPF OQ ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-277	C22 OQ	LINE C22 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-278	C22 OQ SS	LINE C22 SUPER SACK FILLING STATION	None	None	4.25 tons/hour	N/A
07-279	L27-29FV	LINES 27, 28 & 29 FEEDER ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-280	LC22VAC	LINE C22 VACUUM VENT	None	None	4.25 tons/hour	N/A
07-281	LC22R	LINE C22 ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-282	PB2-RHB	POWDER BAGGER #2 ROOF HOPPER BAGHOUSE	None	Filter	8.33 tons/hour	N/A
07-283	KM330DSR	KM330 DUMP STATION ROTOCLONE (LINES 12, 14, 15, 20 & 30)	None	ROTO	less than 100 lb/hr	N/A
07-286	L10-17RSYS	LINES 10 THRU 17 & C16 BULK HOPPER #1 ROTOCLONE SYSTEM	None	ROTO	less than 100 lb/hr	N/A
07-287	LC14RHVRB	LINE C14 ROOF HOPPER VACUUM RECEIVER BLOWER	None	Filter	6 tons/hour	N/A
07-289	L23/24SHCF	LINES 23 & 24 SAN GEL C0896 HOPPER CARTRIDGE FILTER	None	Filter	0.4 tons/hour	N/A
07-290	L27H2CF	LINE 27 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-292	L28SRUVH	LINE 28 STARTUP/RECYCLE UV HOPPER CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A
07-293	L28SRNUVH	LINE 28 STARTUP/RECYCLE NON-UV HOPPER CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A
07-295	L10BH1CF	LINE #10 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	1.25 tons/hour	N/A
07-296	L11BH1CF	LINE #11 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-297	L11BH2CF	LINE #11 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-298	L14BH2	LINE #14 BULK HOPPER #2 BAG HOUSE	None	Filter	2.5 tons/hour	N/A
07-299	L10/11BHR	LINE #10 & 11 BULK HOPPERS RECEIVER	None	Filter	3 tons/hour	N/A
07-300	L14BH2CF	LINE #14 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	1.5 tons/hour	N/A
07-301	LC7BH1CF	LINE C7 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	0.45 tons/hour	N/A
07-302	LC7BH2CF	LINE C7 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	0.45 tons/hour	N/A
07-304	L25BH2CF	LINE #25 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A
07-305	L21BH2CF	LINE #21 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	2.5 tons/hour	N/A
07-306	L20BH1CF	LINE #20 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-307	S71TSDC	SILO 71 TRANSFER SYSTEM DUST COLLECTOR	None	None	32.5 tons/hour	N/A
07-308	S67TSDC	SILO 67 TRANSFER SYSTEM DUST COLLECTOR	None	None	32.5 tons/hour	N/A
07-309	L30SR754H1	LINE 30 STARTUP/RECYCLE 754 HOPPER 1	None	Filter	3.25 tons/hour	N/A
07-310	L30SR754H2	LINE 30 STARTUP/RECYCLE 701 HOPPER 2	None	Filter	3.25 tons/hour	N/A
07-332	BTLS1SV	BULK TRUCK LOADING STATION #1 SILO VENT	None	None	7.5 tons/hour	N/A
07-349	S/R DC SB	STARTUP/RECYCLE DUST COLLECTOR SPARE BLOWER	None	Filter	6 tons/hour	N/A
07-350	SILO SH1	RESIN SILO SHEET 1	None	Filter	12.5 tons/hour	N/A
07-351	SILO SH3	RESIN SILO SHEET 3	None	Filter	12.5 tons/hour	N/A
07-357	ROTOCL	L30-31 CARBON BLACK ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-352	SILO 72	RESIN SILO 72	None	Filter	25 tons/hour	N/A
07-353	10FD-C2-03	C2 BIN VENT A	None	Filter	0.5 tons/hour	N/A
07-354	10FD-C2-04	C2 BIN VENT B	None	Filter	0.5 tons/hour	N/A
07-355	10FDS73-01	SILO 73 BIN VENT	None	Filter	20 tons/hour	N/A
07-358	R SILO 74	RESIN SILO 74 BIN VENT	None	Filter	35.00 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-359	S74DTDCEB	SILO 74 DIRECT TRANSFER DUST COLLECTOR EXHAUST BLOWER	None	Filter	0.5 tons/hour	N/A
07-360	10-GB-BL-0	SILO 74 TRUCK 1 LOADING COLLECTOR EXHAUST BLOWER	None	Filter	1.00 tons/hour	N/A
07-361	10FDL1401	PPP/BP Dust Collector	None	Filter	2.00 tons/hour	2007
07-362	10-FC-S75-01	SILO 75 BIN VENT	None	Filter	25.00 tons/hour	2013

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

A.10 Boilerhouse I [Section K]

A.10.1 Boilerhouse I

Boilerhouse I Affected Facilities/Sources

BEFORE Shutdown of BW-BOILER and E BOILER

(a) The Boilerhouse I area includes boilers that are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as: E BOILER, BW-BOILER, and R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to the E BOILER, BW-BOILER, and R BOILER are specified in Section D of this permit.

SECTION K.1 AFTER Shutdown of BW-BOILER and E BOILER

(a) The Boilerhouse I area includes one boiler that is part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. This boiler is identified as: R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to R BOILER is specified in Section D of this permit.

BH I Boilers - BEFORE Shutdown of BW-BOILER and E BOILER

(b) The boilers located in the Boilerhouse I Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit[(d)(e)]	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
09-001	BW-BOILER	B&W BOILER natural gas with/without supplemental hydrogen	None	None	173 MMBtu/hr	1975
09-002	E BOILER	ERIE BOILER coal fired	BHI Baghouse	None	249 MMBtu/hr	1975
09-106	R BOILER	RILEY BOILER natural gas fired	None	None	178.5 MMBtu/hr	1969

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) E BOILER, BW-BOILER and R BOILER may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a gas chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use the E BOILER, BW BOILER, or R BOILER for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either a COS Oxidizer (08-706) or COS Flare (08-707). The COS Oxidizer and COS Flare are described in Section I of this permit. The COS Flare (08-707) serves only as back-up to the COS Oxidizer (08-706) or during safety interlock of the system.

(e) E BOILER, BW-BOILER, and R BOILER are used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to either the E BOILER or R BOILER for control. After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.

SECTION K.2 AFTER Shutdown of BW-BOILER and E BOILER

The boiler located in the Boilerhouse I is identified as an emissions unit below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit[(d)(e)]	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity[(c)]	Date of Construct
09-106	R BOILER	RILEY BOILER natural gas fired	None	None	178.5 MMBtu/hr	1969

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) R BOILER may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a gas chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use R BOILER for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either a COS Oxidizer (08-706) or COS Flare (08-707). The COS Oxidizer and COS Flare are described in Section I of this permit. The COS Flare (08-707) serves only as back-up to the COS Oxidizer (08-706) or during safety interlock of the system.
(e) R BOILER is used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to R BOILER for control. After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.

BH I Storage and Heat Exchange Operations

(c) The storage and heat exchange operations located in the Boilerhouse I Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
09-101	BH1 CTC1	COOLING TOWER #1 CELL A	None	None	N/A	N/A
09-102	BH1 CTC2	COOLING TOWER #1 CELL B	None	None	N/A	N/A
09-103	BH1 CTC3	COOLING TOWER #1 CELL C	None	None	N/A	N/A
09-104	BH1 CTC4	COOLING TOWER #1 CELL D	None	None	N/A	N/A
09-105	BH1 CTC5	COOLING TOWER #1 CELL E	None	None	N/A	N/A
09-107	PRV-TS	PRV TEST STAND	None	None	N/A	N/A
09-111	MG CTC3	COOLING TOWER CELL 3	None	None	N/A	N/A
09-112	GST VH4	UNLEADED GASOLINE TANK VH4	None	None	2.13 m^3	N/A
09-113	DST VH5	DIESEL STORAGE TANK VH5	None	None	2.13 m^3	N/A

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

A.11 Structured Products [Section L]

A.11.1 Structured Products, Building 4

Structured Products Affected Facilities/Sources

(a) Sp-PPPC is the affected source pursuant to 40 CFR 63, Subpart PPPP - National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products. In accordance with 40 CFR 63, Subpart PPPP, the following emissions units comprise the affected source, identified as Sp-PPPC, that is subject to 40 CFR 63, Subpart PPPP:

(1) All coating operations as defined in 40 CFR 63.4581 (plastic coating lines identified in Section L.2 of this permit as C-41 and C-42 are included in this affected source);

(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(b) Sp-POWC is the affected source pursuant to 40 CFR 63, Subpart JJJJ – National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating. The affected source, identified as Sp-POWC, comprises all web coating lines, as set forth in 40 CFR 63.3300. Web, as defined in 40 CFR 63.3310 means a continuous substrate which is flexible enough to be wound or unwound as rolls. Web coating lines identified in Section L.2 of this permit as S-4, S-5, and C-6, and film coating line identified as C-45, C7A, C7B, and C8 are included in this affected source.

Structured Products Operations

(c) The Structured Products operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
09-001; 09-002; and 09-106	SHEETFUMES*	COATING LINES - C-41, C-42, S-4, S-5	BEFORE Shutdown of the BW-BOILER and E BOILER: BW-BOILER, E BOILER OR R BOILER-Section K AFTER Shutdown of BW-BOILER and E BOILER: SHEETFUMES TO or R BOILER	None	N/A	N/A
10-086	OSFCA	C-45 FILM COATER	None	None	N/A	N/A
10-087	OSFCB		None	None	N/A	N/A
10-199	C42FMR	C-42 FMR COOLING ZONE	None	None	N/A	N/A
10-358	C7A	C7A PLASTIC FILM WEB COATING LINE	None	None	N/A	2005
10-359	C7B	C7B PLASTIC FILM WEB COATING LINE	None	None	N/A	2005
10-360	C8	C8 PLASTIC FILM WEB COATING LINE	None	None	N/A	2006
10-361	C-6	C-6 COATING LINE	None	None	N/A	N/A

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-010	EDV S5	EXTRUDER & DIE VENT S-5	None	None	1.70 tons/hour	N/A
10-011	EHV S4	EXTRUDER & DIE VENT S-4	None	None	1.23 tons/hour	N/A
10-012	EHV S3	EXTRUDER HEATER VENT S-3	None	None	0.33 tons/hour	N/A
10-013	EHV S1	EXTRUDER HEATER VENT S-1	None	None	0.20 tons/hour	N/A
10-014	PDH86	PELLET DRYING HOPPER 86	None	None	1.60 tons/hour	N/A
10-015	PDH85	PELLET DRYING HOPPER 85	None	None	1.60 tons/hour	N/A
10-016	PDH84	PELLET DRYING HOPPER 84	None	None	1.60 tons/hour	N/A
10-017	PDH83	PELLET DRYING HOPPER 83	None	None	1.60 tons/hour	N/A
10-018	PDH82	PELLET DRYING HOPPER 82	None	None	1.60 tons/hour	N/A
10-019	PDH81	PELLET DRYING HOPPER 81	None	None	1.60 tons/hour	N/A
10-020	PDH76	PELLET DRYING HOPPER 76	None	None	1.23 tons/hour	N/A
10-021	PDH75	PELLET DRYING HOPPER 75	None	None	1.23 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-022	PDH74	PELLET DRYING HOPPER 74	None	None	1.23 tons/hour	N/A
10-023	PDH73	PELLET DRYING HOPPER 73	None	None	1.23 tons/hour	N/A
10-024	PDH72	PELLET DRYING HOPPER 72	None	None	1.23 tons/hour	N/A
10-025	PDH71	PELLET DRYING HOPPER 71	None	None	1.23 tons/hour	N/A
10-026	PDH43	PELLET DRYING HOPPER 43	None	None	1.23 tons/hour	N/A
10-027	PDH45	PELLET DRYING HOPPER 45	None	None	1.23 tons/hour	N/A
10-028	PDH44	PELLET DRYING HOPPER 44	None	None	1.23 tons/hour	N/A
10-029	PDH42	PELLET DRYING HOPPER 42	None	None	1.23 tons/hour	N/A
10-030	PDH46	PELLET DRYING HOPPER 46	None	None	1.23 tons/hour	N/A
10-031	PDH41	PELLET DRYING HOPPER 41	None	None	1.23 tons/hour	N/A
10-032	PDH53	PELLET DRYING HOPPER 53	None	None	1.70 tons/hour	N/A
10-033	PDH51	PELLET DRYING HOPPER 51	None	None	1.70 tons/hour	N/A
10-034	PDH52	PELLET DRYING HOPPER 52	None	None	1.70 tons/hour	N/A
10-035	PDH37	PELLET DRYING HOPPER 37	None	None	0.33 tons/hour	N/A
10-036	PDH35	PELLET DRYING HOPPER 35	None	None	0.33 tons/hour	N/A
10-037	PDH36	PELLET DRYING HOPPER 36	None	None	0.33 tons/hour	N/A
10-038	PDH34	PELLET DRYING HOPPER 34	None	None	0.33 tons/hour	N/A
10-039	PDH31	PELLET DRYING HOPPER 31	None	None	0.33 tons/hour	N/A
10-040	PDH33	PELLET DRYING HOPPER 33	None	None	0.33 tons/hour	N/A
10-041	PDH32	PELLET DRYING HOPPER 32	None	None	0.33 tons/hour	N/A
10-042	PDH14	PELLET DRYING HOPPER 14	None	None	0.33 tons/hour	N/A
10-043	PDH13	PELLET DRYING HOPPER 13	None	None	0.55 tons/hour	N/A
10-044	PDH12	PELLET DRYING HOPPER 12	None	None	0.55 tons/hour	N/A
10-045	PDH11	PELLET DRYING HOPPER 11	None	None	0.55 tons/hour	N/A
10-046	PDH65	PELLET DRYING HOPPER 65	None	None	0.55 tons/hour	N/A
10-047	PDH64	PELLET DRYING HOPPER 64	None	None	0.55 tons/hour	N/A
10-048	PDH63	PELLET DRYING HOPPER 63	None	None	0.55 tons/hour	N/A
10-049	DHE (S8)	DIE HEAD EXHAUST S-8/S-1	None	None	1.60 tons/hour	N/A
10-054	EDHE (S6)	EXTRUDER & DIE HEAD EXHAUST S-6	None	None	0.55 tons/hour	N/A
10-055	DHE (S10)	DIE HEAD EXHAUST S10	None	None	0.55 tons/hour	N/A
10-055	DHE (S2)	DIE HEAD EXHAUST S-2	None	None	0.20 tons/hour	N/A
10-056	PDH62	PELLET DRYING HOPPER 62	None	None	0.55 tons/hour	N/A
10-057	PDH61	PELLET DRYING HOPPER 61	None	None	0.55 tons/hour	N/A
10-077	PED	PROFILE EXTRUDER & DIE	None	None	0.50 tons/hour	N/A
10-078	PDH161	PROFILE PELLET DRYING HOPPER 161	None	None	0.50 tons/hour	N/A
10-079	PDH162	PROFILE PELLET DRYING HOPPER 162	None	None	0.50 tons/hour	N/A
10-080	PDH163	PROFILE PELLET DRYING HOPPER 163	None	None	0.50 tons/hour	N/A
10-081	PDH164	PROFILE PELLET DRYING HOPPER 164	None	None	0.50 tons/hour	N/A
10-082	PDH165	PROFILE PELLET DRYING HOPPER 165	None	None	0.50 tons/hour	N/A
10-083	PDH166	PROFILE PELLET DRYING HOPPER 166	None	None	0.50 tons/hour	N/A
10-097	CAVP-097	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-098	CAVP-098	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-099	QCSB	QC SPRAY BOOTH	None	None	Less Than 100 lb/hr	N/A
10-100	QABH	QA BURN HOOD	None	None	Less Than 100 lb/hr	N/A
10-101	QA01	QC OVEN 1	None	None	N/A	N/A
10-105	DCE	DIE CLEAN EXHAUST	None	None	N/A	N/A
10-106	S1 BLOWER	SCALE 1 BLOWER	None	Filter	5.43 tons/hour	N/A
10-107	S2 BLOWER	SCALE 2 BLOWER	None	Filter	5.43 tons/hour	N/A
10-108	S3 BLOWER	SCALE 3 BLOWER	None	Filter	5.43 tons/hour	N/A
10-112	PDH51N	PELLET DRYER HOPPER	None	None	0.10 tons/hour	N/A
10-113	PDH52N	PELLET DRYER HOPPER	None	None	0.10 tons/hour	N/A
10-114	PDH53N	PELLET DRYER HOPPER	None	None	0.10 tons/hour	N/A
10-115	CAVP-115	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-116	CAVP-116	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-117	CAVP-117	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-118	CAVP-118	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-120	PDH131	PELLET DRYING HOPPER 131	None	None	0.78 tons/hour	N/A
10-121	PDH132	PELLET DRYING HOPPER 132	None	None	0.78 tons/hour	N/A
10-122	PDH133	PELLET DRYING HOPPER 133	None	None	0.78 tons/hour	N/A
10-123	PDH134	PELLET DRYING HOPPER 134	None	None	0.78 tons/hour	N/A
10-124	PDH135	PELLET DRYING HOPPER 135	None	None	0.78 tons/hour	N/A
10-125	CAVP-125	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-126	CAVP-126	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-127	T13ED	EXTRUDER/DIE EXHAUST	None	None	0.46 tons/hour	N/A
10-128	CAVP-128	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-129	CAVP-129	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-130	CAVP-130	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-131	CAVP-131	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-134	PDH1413	PELLET DRYING HOPPER 1413	None	None	1.23 tons/hour	N/A
10-135	PDH1414	PELLET DRYING HOPPER 1414	None	None	1.23 tons/hour	N/A
10-136	PDH1411	PELLET DRYING HOPPER 1411	None	None	1.23 tons/hour	N/A
10-136	PDH1421	PELLET DRYING HOPPER 1421	None	None	1.23 tons/hour	N/A
10-136	PDH1431	PELLET DRYING HOPPER 1431	None	None	1.23 tons/hour	N/A
10-137	PDH1412	PELLET DRYING HOPPER 1412	None	None	1.23 tons/hour	N/A
10-137	PDH1432	PELLET DRYING HOPPER 1432	None	None	1.23 tons/hour	N/A
10-138	PDH1441	PELLET DRYING HOPPER 1441	None	None	1.23 tons/hour	N/A
10-138	PDH1451	PELLET DRYING HOPPER 1451	None	None	1.23 tons/hour	N/A
10-138	PDH1461	PELLET DRYING HOPPER 1461	None	None	1.23 tons/hour	N/A
10-139	PDH1442	PELLET DRYING HOPPER 1442	None	None	1.23 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-139	PDH1452	PELLET DRYING HOPPER 1452	None	None	1.23 tons/hour	N/A
10-139	PDH1462	PELLET DRYING HOPPER 1462	None	None	1.23 tons/hour	N/A
10-146	F14ED	F14 EXTRUDER & DIE	None	None	1.23 tons/hour	N/A
10-147	GS8-BH	GRINDER TRANSFER BLOWER	None	Filter	0.12 tons/hour	N/A
10-148	G2	GRINDER 2	None	None	0.12 tons/hour	N/A
10-149	G1	GRINDER	None	None	0.06 tons/hour	N/A
10-150	G3	GRINDER 3	None	None	0.12 tons/hour	N/A
10-150	G4	GRINDER 4	None	None	0.12 tons/hour	N/A
10-152	F12ED	F12 EXTRUDER & DIE	None	None	0.70 tons/hour	N/A
10-153	PDH121	PELLET DRYING HOPPER 121	None	None	0.70 tons/hour	N/A
10-154	PDH122	PELLET DRYING HOPPER 122	None	None	0.70 tons/hour	N/A
10-155	PDH123	PELLET DRYING HOPPER 123	None	None	0.70 tons/hour	N/A
10-156	PDH124	PELLET DRYING HOPPER 124	None	None	0.70 tons/hour	N/A
10-157	CAVP-157	CONAIR VACUUM PUMP	None	None	1.50 tons/hour	N/A
10-158	CAVP-158	CONAIR VACUUM PUMP	None	None	1.50 tons/hour	N/A
10-159	PDH111	PELLET DRYING HOPPER 111	None	None	0.55 tons/hour	N/A
10-160	PDH112	PELLET DRYING HOPPER 112	None	None	0.55 tons/hour	N/A
10-161	CAVP-161	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-162	TC (A)	RECOVERY DEVICE	None	Cyclone	Less Than 100 lb/hr	N/A
10-168	TC(B)	RECOVERY DEVICE	None	Cyclone	Less Than 100 lb/hr	N/A
10-171	AIR ELIM A	RECOVERY DEVICE	None	None	Less Than 100 lb/hr	N/A
10-172	AIR ELIM B	RECOVERY DEVICE	None	None	Less Than 100 lb/hr	N/A
10-178	KE	R&D SPRAY BOOTH - HWR	None	None	Less Than 100 lb/hr	N/A
10-179	R&D CCRC	R&D COLD CAST ROLL COATER, UV CURE AND EXTRUDER	None	None	Less Than 100 lb/hr	N/A
10-180	RRC&C	REVERSE ROLL COATER & CURE	None	None	1.60 tons/hour	N/A
10-181	SILO 1 BV	BAGHOUSE SILO 1	None	Filter	5.43 tons/hour	N/A
10-182	SILO 2 BV	BAGHOUSE SILO 2	None	Filter	5.43 tons/hour	N/A
10-183	SILO 3 BV	BAGHOUSE SILO 3	None	Filter	5.43 tons/hour	N/A
10-184	LPS BLOWER	LPS BIN VENT BLOWER	None	None	0.50 tons/hour	N/A
10-185	F14 BV	BAGHOUSE RECOVERY DEVICE	None	Filter	1.23 tons/hour	N/A
10-186	S4 BV	BAGHOUSE RECOVERY DEVICE	None	Filter	1.20 tons/hour	N/A
10-187	S5 BV	BAGHOUSE RECOVERY DEVICE	None	Filter	1.75 tons/hour	N/A
10-189	DHE UCFL	DIE HOOD EXHAUST - ULTEM# CAST FILM LINE	None	None	0.20 tons/hour	N/A
10-191	PDH 1701	PELLET DRYING HOPPER 1701	None	None	0.20 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-192	PDH 1702	PELLET DRYING HOPPER 1702	None	None	0.20 tons/hour	N/A
10-193	PDH1703	PELLET DRYING HOPPER 1703	None	None	0.20 tons/hour	N/A
10-194	PDH1704	PELLET DRYING HOPPER 1704	None	None	0.20 tons/hour	N/A
10-195	CAVP-195	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-196	CAVP-196	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-200	FLH	FINISHING LAB HOOD	None	None	N/A	N/A
10-202	HWL-KL51	R&D HOOD WET LAB	None	None	N/A	N/A
10-203	HWL-KL52	R&D HOOD WET LAB	None	None	N/A	N/A
10-204	HWL-LM51	R&D HOOD WET LAB	None	None	N/A	N/A
10-205	HWL-LM52	R&D HOOD WET LAB	None	None	N/A	N/A
10-206	OWL-L3	R&D OVEN WET LAB	None	None	N/A	N/A
10-207	OWL-LM31	R&D OVEN WET LAB	None	None	N/A	N/A
10-208	OWL-LM32	R&D OVEN WET LAB	None	None	N/A	N/A
10-300	PDH113	PELLET DRYING HOPPER 113	None	None	0.55 tons/hour	N/A
10-301	PDH114	PELLET DRYING HOPPER 114	None	None	0.55 tons/hour	N/A
10-302	PDH91	PELLET DRYING HOPPER 91	None	None	0.55 tons/hour	N/A
10-302	PDH92	PELLET DRYING HOPPER 92	None	None	0.55 tons/hour	N/A
10-303	PDH93	PELLET DRYING HOPPER 93	None	None	0.55 tons/hour	N/A
10-303	PDH94	PELLET DRYING HOPPER 94	None	None	0.55 tons/hour	N/A
10-304	PDH20	PELLET DRYING HOPPER 20	None	None	0.20 tons/hour	N/A
10-304	PDH21	PELLET DRYING HOPPER 21	None	None	0.20 tons/hour	N/A
10-304	PDH22	PELLET DRYING HOPPER 22	None	None	0.20 tons/hour	N/A
10-304	PDH23	PELLET DRYING HOPPER 23	None	None	0.20 tons/hour	N/A
10-305	PDH101	PELLET DRYING HOPPER 101	None	None	0.55 tons/hour	N/A
10-305	PDH104	PELET DRYING HOPPER 104	None	None	0.55 tons/hour	N/A
10-306	PDH102	PELLET DRYING HOPPER 102	None	None	0.55 tons/hour	N/A
10-306	PDH103	PELLET DRYING HOPPER 103	None	None	0.55 tons/hour	N/A
10-307	PDH 54N	PELLET DRYING HOPPER 54 NEW	None	None	1.70 tons/hour	N/A
10-308	PDH55N	PELLET DRYING HOPPER 55 NEW	None	None	1.70 tons/hour	N/A
10-309	PDH56N	PELLET DRYING HOPPER 56 NEW	None	None	1.70 tons/hour	N/A
10-310	CAVP-310	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-311	CAVP-311	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-312	CAVP-312	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-313	CAVP-313	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-314	CAVP-314	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-315	CAVP-315	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-316	CAVP-316	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-317	CAVP-317	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-318	CAVP-318	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-319	CAVP-319	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-320	CAVP-320	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-321	CAVP-321	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-322	CAVP-322	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-323	CAVP-323	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-324	CAVP-324	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-325	CAVP-325	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-326	CAVP-326	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-327	CAVP-327	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-328	CAVP-328	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-329	CAVP-329	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-330	CAVP-330	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-331	CAVP-331	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-332	CAVP-332	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-333	SB24	SURGE BIN 24	None	Filter	0.57 tons/hour	N/A
10-334	CAVP-334	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-335	CAVP-335	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-336	CAVP-336	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-337	CAVP-337	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-338	TC (C)	RECOVERY DEVICE	None	Cyclone	Less Than 100 lb/hr	N/A
10-339	F9DH	F9 DIE HOOD VENT	None	None	0.40 tons/hour	N/A
10-340	F-17 CYC	F-17 RECOVERY DEVICE	None	Cyclone	0.20 tons/hour	N/A
10-341	DHE (S1)	S1 DIE HEAD EXHAUST	None	None	0.55 tons/hour	N/A
10-343	CPVP1-4	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
10-344	CPVP5-8	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
10-347	F-903	FILTER RECEIVER	None	Filter	0.15 tons/hour	N/A
10-348	P3	P3 VACUUM PUMP SILOS 1 & 2	None	Filter	0.10 tons/hour	N/A
10-349	P4	P4 VACUUM PUMP SILOS 3 & 5	None	Filter	0.10 tons/hour	N/A
10-350	P5	P5 VACUUM PUMP SILOS 4 & 6	None	Filter	0.10 tons/hour	N/A
10-351	F908	F-908 FILTER RECEIVER	None	Filter	0.15 tons/hour	N/A
10-352	S-48	COATING ROOM LAB HOOD	None	None	N/A	N/A
10-353	MTLF18	CONAIR MATERIAL TRANSFER VENT LINE F-18	None	Filter	0.40 tons/hour	N/A
10-355	MTLF19	CONAIR MATERIAL TRANSFER VENT LINE F-19	None	Filter	0.40 tons/hour	N/A
10-356	F18BV	F-18 BARREL VENT	None	None	0.40 tons/hour	N/A
10-357	F19BV	F-19 BARREL VENT	None	None	0.40 tons/hour	N/A
10-362	SAW CHIPS	S16 OQ SAW CHIP FILTER BAG	None	None	Less than 100 lbs/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* BEFORE shutdown of BW-BOILER and E BOILER the SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S-4, and S-5. The boilers described in Section K of this permit, E BOILER, BW-BOILER and R BOILER are used for controlling VOC emissions from the SHEETFUMES stream.

** AFTER shutdown of BW-BOILER and E BOILER, the SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S-4, and S-5. The boiler described in Section K of this permit, R BOILER, or SHEETFUMES TO, described in this Section, is used for controlling VOC emissions from the SHEETFUMES stream.

Temporary Boiler

(d) The boiler listed below represents a temporary, portable steam generating unit for Structured Products. The stack/vent I.D.; emission unit I.D; emission unit description; maximum heat capacity; and date of construction are in the following table:

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Maximum Capacity	Date of Construct
10-500	TEMPBOILER	Small natural gas or No.2 fuel oil fired boiler	10.468 MMBtu/hr	N/A

[(a)] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

A.12 LEXAN# Development [Section M]

A.12.1 LEXAN# Development, Building 7

LEXAN# Development Operations

(a) The LDF operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
11-018	BFBPAH	RAW MATERIAL ADDITION V3011	None	Bag Filter	0.15 tons/hr	N/A
11-020	C-3041	VENTILATION SYSTEM BLOWER	None	None	N/A	N/A
11-025	V-9111	V-9111 REFRIGERATED WATER SYSTEM	None	None	N/A	N/A
11-027	C-8123	VENT GAS ABSORBER	None	Scrubber*	N/A	N/A
11-123	F-3313	F-3313 DUST COLLECTOR	None	Bag Filter	0.15 tons/hr	N/A
11-124	F-3311	F-3311 DUST COLLECTOR	None	Bag Filter	0.15 tons/hr	N/A
11-148	C-9014	DI HCL DRUM SCRUBBER	None	None	N/A	N/A
11-149	V-9811	DIESEL FUEL TANK	None	None	N/A	N/A
11-150	FDCS	FUGITIVE DUST COLLECTION SYSTEM	None	Bag Filter	less than 100 lbs/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
11-151	LDF-OQEDV	LDF OQ EXTRUDER AND DIE VENT	None	Bag Filter	less than 100 lbs/hr	N/A
11-152	LDF-OQEDC	LDF OQ EXTRUDER DUST COLLECTOR	None	Bag Filter	less than 100 lbs/hr	N/A
11-153	V-3060	V-3060	None	Bagfilter	0.15 tons/hour	N/A
11-154	F-3017	K-TRON FEEDER	None	Bagfilter	0.15 tons/hour	N/A
11-155	F-3315	RESIN DRYER	None	Bagfilter	0.15 tons/hour	N/A
11-156	F-3316	RESIN DRYER	None	Bagfilter	0.15 tons/hour	N/A
11-157	F-3317	RESIN DRYER	None	Bagfilter	0.15 tons/hour	N/A
11-158	F-6010	BPA UNLOADING SYSTEM	None	Bagfilter	0.15 tons/hour	N/A
11-159	F-6011	BPA RECEIVER	None	Bagfilter	0.15 tons/hour	N/A

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
* There are no regulatory requirements for this scrubber. This scrubber is part of the polycarbonate development process which processes methylene chloride which is not a VOC.

A.13 CPP Resin [Section N]

A.13.1 CPP Resin, Buildings 28, 34, and 60

CPP Resin Affected Facilities/Sources

(a) The affected facilities subject to 40 CFR 60, Subpart RRR are identified as CppR-710E and CppR-710PE. Each affected facility consists of unit operations in which one or more chemicals or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed, plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(b) The affected facilities subject to 40 CFR 60, Subpart NNN are identified as CppC-310, CppC-610 and CppC-712. Each affected facility consists of a device or vessel in which distillation operations occur, including all associated internals (such as tray or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(c) CppVV is an affected facility in the CPP Process Unit subject to 40 CFR 60, Subpart VV. CppVV consists of components assembled to produce Methanol and includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valve or lines, valves, and flanges or other connectors in VOC service and any other devices or systems required by Subpart VV.

(d) The CPP Resin area includes process heaters, identified as H-390 H-109, and H-790 which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-390 H-109 and H-790 (unit designed to burn gas 1 subcategory), are specified in Section D of this permit.

CPP Resin Process Operations

(e) The CPP Resin process operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate; the date of construction; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-154	E-314*	V-310 STORAGE TANK (Note: V-310 is the C-310 distillation overheads receiver)	None	Condenser	N/A	Prior 1985
12-632A/B	E-313	CONDENSER E-313	None	E-313 is recovery device	N/A	1983
12-169	H-390	H-390 HOT OIL HEATER CAPABLE OF BURNING NATURAL GAS AND OFF GAS***	None	None	17.28 MMBtu/hr	1984
12-357	VLX CTC1	VALOX COOLING TOWER CELL 1	None	None	N/A	N/A
12-358	VLX CTC2	VALOX COOLING TOWER CELL 2	None	None	N/A	N/A
12-701	H-790	22 MMBTU/hr natural gas-fired process heater, formerly 04-213 M-475 in BPA constructed in 1975	None	None	22 MMBtu/hr	Relocated 2014

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-172	W370A/B	TRANSFER BINS W-370/A/B	None	None	13.75 tons/hr	N/A
12-230	DTL	TRUCK LOADING	None	None	N/A	N/A
12-247	PD-470A	PELLETIZER DRYER D-470A	None	None	3.44 tons/hr	N/A

12-247	PD-470B	PELLETIZER DRYER D-470B	None	None	3.44 tons/hr	N/A
12-251	E-602	UNLOADING FACILITY TANK V-600	None	None	N/A	N/A
12-356	PD-370A	PELLETIZER DRYER D-370A	None	None	3.44 tons/hr	N/A
12-359	H-370	DIE HEAD CLEANING OVEN H-370	None	None	N/A	N/A
12-561	V-496	V-496 RAIL CAR UNLOADING	None	None	N/A	N/A
12-586**	BOVEN	H-390 OFF GAS VENT	None	None	N/A	N/A
12-702	PTA US	PTA RAIL CAR UNLOADING STATION	None	Filter	21 tons/hr	N/A
12-703	PTA SILO	PTA STORAGE SILO	None	Filter	21 tons/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))
* The distillation operation identified as C-310 is subject to NSPS requirements. C-310 vents through stack/vent 12-154, identified as emission unit E-314.
** S/V 12-586 is a stack that provides by-pass from H-390 for process safety purposes; 12-586 is normally not an active vent.
*** The distillation operations identified as affected facilities CppC-610 and CppC-712 are subject to NSPS Subpart NNN requirements and vent to H-390 as part of the fuel gas system.

CPP Resin Area Tanks

(f) Tanks located in the CPP Resin Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate; the date of construction; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
12-003	TK-106	RECOVERY TANK T106	None	None	N/A	Prior to 1984
12-150	V-318	V-318 STORAGE TANK	None	None	4.1 m^3	1983
12-153	JKD 308	V-308 STORAGE TANK	None	Condenser	6.7 m^3	1984
12-156	E-322	V-320/E-322 STORAGE TANK	None	Condenser	3.3 m^3	1984
12-157	JKD PIPE	V330 STORAGE TANK	None	Condenser	3.3 m^3	1984
12-159	V-340	V-340 STORAGE TANK	None	None	5.6 m^3	1984
12-160	V-450	V-450 STORAGE TANK	None	None	6.4 m^3	N/A
12-162	V-360	V-360 STORAGE TANK	None	None	6.4 m^3	1984
12-165	V-364	V-364 STORAGE TANK	None	None	6.7 m^3	1984
12-229	V-460	V-460 STORAGE TANK	None	None	8.7 m^3	1988

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
12-560	V-401	TANK V-401	V301/401SC*	None	417 m^3	1988
12-632A/B	E-104A	STORAGE TANK T104A	ScrubberC-510*	Condenser E-104A	90.84 m^3	1973
12-632A/B	E-104B	STORAGE TANK T104B	ScrubberC-510*	Condenser E-104B	113.5 m^3	1975
12-632A/B	E-313	STORAGE TANK V-311	Scrubber C-510*	Condenser E-313	204.5 m^3	1984
12-632A/B	E-602	STORAGE TANK V-600	Scrubber C-510*	None	44.5 m^3	1984

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
12-114	E-1110	STORAGE TANK (T-1110)	None	None	193 m^3	1989
12-149	V-304	V-304 STORAGE TANK	None	None	96 m^3	1984
12-152	V-307	V-307 STORAGE TANK	None	None	417 m^3	1984
12-158	JACK PIPE	V-431 STORAGE TANK	None	Condenser	1.0 m^3	1988
12-161	V-351	V-351 STORAGE TANK	None	None	3.5 m^3	1984
12-163	V-362	V-362 STORAGE TANK	None	None	3.5 m^3	1984
12-164	V-363	V-363 STORAGE TANK	None	None	2.0 m^3	N/A
12-166	V-390	V-390 STORAGE TANK	None	None	52 m^3	1984
12-168	V-392	V-392 STORAGE TANK	None	None	3.7 m^3	1984
12-560	V-301	STORAGE TANK	V301/401SC*	None	N/A	N/A
12-359	V-302	STORAGE TANK	None	None	17.1 m^3	1984
12-359	V-306	STORAGE TANK	None	None	0.8 m^3	1984

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Emissions from storage tanks V-301, and V-401 are routed to the scrubber identified as V301/401SC and emissions from TK-104A, TK-104B, V-311 and V-600 are routed to the scrubber identified as C-510.

CPP Resin Leak Detection and Repair (LDAR) Components

(g) LDAR applies to the collection of all equipment (as defined in 40 CFR 60.481) located in the CppVV affected facility. This equipment includes each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector that is in VOC service. In VOC service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VOC. [40 CFR 60.481]

CPP Resin Leak Detection and Repair (LDAR) Components

(g) LDAR applies to the collection of all equipment (as defined in 40 CFR 60.481) located in the CppVV affected facility. This equipment includes each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector that is in VOC service. In VOC service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VOC. [40 CFR 60.481]

A.14 CPP Finishing [Section O]

A.14.1 CPP Finishing, Buildings 29 and 30

CPP Finishing Operations

(a) The CPP Finishing operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Insignificant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-039	CL2RH	CL2 RESIN HOPPER	None	None	0.5 tons/hour	N/A
12-042	V-506D	V-506 ELUTRIATOR DUST COLLECTOR	Filter	None	2 tons/hour	N/A
12-057	V-506	V506 RESIN HOPPER	None	None	2 tons/hour	N/A
12-072	SILO J	J RAW MATERIAL SYSTEM	None	Filter	1.5 tons/hour	N/A
12-073	SILO K	K RAW MATERIAL SYSTEM	None	Filter	1.5 tons/hour	N/A
12-137	L12RBF/A	L12 195 HOPPER	None	Filter	1.2 tons/hour	N/A
12-138	L12RBF/B	L12 315 HOPPER	None	Filter	1.2 tons/hour	N/A
12-142	L13RBF/A	L13 195 HOPPER	None	Filter	1.2 tons/hour	N/A
12-143	L13RBF/B	L13 315 HOPPER	None	Filter	1.2 tons/hour	N/A
12-145	L4CF	L4/12/13 CENTRAL COLLECTION SYSTEM	None	Filter	3.5 tons/hour	N/A
12-170	CSM	CHIP SILO M	None	None	5 tons/hour	N/A
12-171	CSN	CHIP SILO N	None	None	5 tons/hour	N/A
12-173	BCB (VLX)	BAG COLLECTOR BLOWER	None	Filter	5 tons/hour	N/A
12-181	CL4RBF/A	BAG FILTER 315	None	Filter	0.5 tons/hour	N/A
12-182	CL4RBF/B	BAG FILTER 195	None	Filter	0.5 tons/hour	N/A
12-185	L15RBF/A	V1501 L15 195 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-186	L15RBF/B	V1502 L15 315 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-189	L16RBF/A	V1601 L16 195 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-190	L16RBF/B	V1501T L16 315 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-193	L17RBF/A	V1701 L17 195 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-194	L17RBF/B	V1701 L17 315 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-195	FRSS	FR STORAGE SILO	None	Filter	less than 100 lbs/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
12-196	FPRCS2	HOFFMAN BLOWER K-005	None	Filter	9 tons/hour	N/A
12-197	L14EFP	COMP-2 BLOWER K-003	None	Filter	less than 100 lbs/hr	N/A
12-201	L8LPSA	LEXAN# POWDER SILO A F812A	None	Filter	1.5 tons/hour	N/A
12-203	L8RBF/A	V915 LINE 8 195 VESSEL	None	Filter	2.5 tons/hour	N/A
12-204	L8RBF/B	V1515B LINE 8 315 VESSEL	None	Filter	2.5 tons/hour	N/A
12-205	L8LPF	L8 LEXAN# POWDER DAY BIN BAG FILTER A	None	Filter	1.5 tons/hour	N/A
12-206	L15-17	EXTRUDER FUME VENTILATION LINES 15-17 SOUTH	None	None	0.3465 tons/hour	N/A
12-207	FCDC2	L5 ROOF TOP MICA HOPPER	None	Filter	1.75 tons/hour	N/A
12-208	BLS-A	BULK LOADING SILO A	None	None	3 tons/hour	N/A
12-209	BLS-B	BULK LOADING SILO B	None	None	3 tons/hour	N/A
12-210	BLS-C	BULK LOADING SILO	None	None	3 tons/hour	N/A
12-211	BLS-D	BULK LOADING SILO D	None	None	3 tons/hour	N/A
12-212	BLSDEF-A	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-213	BLSDEF-B	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-214	BLSDEF-C	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-215	BLSDEF-D	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-216	BLSW-A	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-217	BLSW-B	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-218	BLSW-C	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-219	BLSW-D	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-220	BLSE-A	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-221	BLSE-B	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-222	BLSE-C	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-223	BLSE-D	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-226	L17LPRF	L17 LEXAN# POWDER RECEIVER BAG FILTER	None	Filter	1.5 tons/hour	N/A
12-248	BLSABB	BULK LOADING SILO A BLENDING BLOWER	None	Filter	10 tons/hour	N/A
12-249	BLSBBB	BULK LOADING SILO B BLENDING BLOWER	None	Filter	10 tons/hour	N/A
12-250	RSH2	V-507 STORAGE HOPPER	None	None	3 tons/hour	N/A
12-253	V-1620	L16 IMPACT MODIFIER SURGE HOPPER (EXTRUDER LINE 16)	None	None	1 tons/hour	N/A
12-254	V-1720	L17 IMPACT MODIFIER SURGE HOPPER (EXTRUDER LINE 17)	None	None	1 tons/hour	N/A
12-257	FPRCS1	HOFFMAN BLOWER K-2001	None	Filter	9 tons/hour	N/A
12-258	F-1804	DUST COLLECTION SYSTEM (F1804) - WET SCRUBBER FOR L18	None	Rotoclone	2.5 tons/hour	N/A
12-259	F-1801	V-1804 RESIN BIN WITH F-1801 VENT FILTER - BIN FILTER (L18&19)	None	Filter	2.5 tons/hour	N/A
12-260	F-1802	V-1805 RESIN BIN WITH F-1802 VENT FILTER - BIN FILTER (L18&19)	None	Filter	2.5 tons/hour	N/A
12-261	V-1808A	V-1808A LEXAN# PELLET BIN	None	None	2.5 tons/hour	N/A
12-262	V-1808B	V-1808B LEXAN# PELLET BIN	None	None	2.5 tons/hour	N/A
12-263	V-1806	V-1806 LEXAN# POWDER BIN	None	None	1.5 tons/hour	N/A
12-264	V-1815	V-1815 LEXAN# POWDER RECEIVER	None	Filter	1.5 tons/hour	N/A
12-265	V-1801	V-1801 RECYCLE BIN	None	None	1.875 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
12-266	V-1803	L18 V-1803 FLAME RETARDANT	None	None	2.5 tons/hour	N/A
12-267	V-1807	L18 LEXAN# V-1807 MISCELLANEOUS PELLET BIN	None	None	2.5 tons/hour	N/A
12-268	L18E	EXTRUDER FUME VENTILATION LINE 18	None	None	2.5 tons/hour	N/A
12-268	L19E	EXTRUDER FUME VENTILATION LINE 19	None	None	2.5 tons/hour	N/A
12-269	F-1901	L19 DUST COLLECTION SYSTEM (F1901) - WET SCRUBBER	None	Rotoclone	2.5 tons/hour	N/A
12-270	F-1902	V-1930 RESIN BIN WITH F-1902 VENT FILTER	None	Filter	2.5 tons/hour	N/A
12-271	V-1931	V-1931 MISCELLANEOUS PELLET BIN	None	Filter	2.5 tons/hour	N/A
12-272	V-1932	V-1932 LEXAN# POWDER BIN	None	Filter	2.5 tons/hour	N/A
12-273	V-1905	V-1905 LEXAN# POWDER RECEIVER	None	Filter	2.5 tons/hour	N/A
12-274	V-1928	L19 V-1928 FLAME RETARDANT BIN	None	None	2.5 tons/hour	N/A
12-275	V-1929	L19 V-1929 FLAME RETARDANT BIN	None	None	2.5 tons/hour	N/A
12-276	V-1902	L19 V-1902 RECYCLE BIN	None	None	2.5 tons/hour	N/A
12-277	V-1904	V-1904 IMPACT MODIFIER PELLET BIN	None	None	2.5 tons/hour	N/A
12-278	V-1906	V-1906 IMPACT MODIFIER	None	None	2.5 tons/hour	N/A
12-279	K-1902A	L18&19 K-1902 A VACUUM BLOWER	None	Filter	2.5 tons/hour	N/A
12-280	K-1902B	L18&19 K-1902 B VACUUM BLOWER	None	Filter	2.5 tons/hour	N/A
12-350	L5-13	EXTRUDER FUME VENTILATION LINES 5 TO 13 NORTH	None	None	6 tons/hour	N/A
12-352	CVACB	CENTRAL VACUUM CLEANING	None	None	60 tons/hour	N/A
12-400	L5BFDC	L5, 6, 7 DUST COLLECTOR	None	Filter	1 tons/hour	N/A
12-404	L15FGPF	LINE 15 FIBERGLASS LIW FEEDER	None	None	2 tons/hour	N/A
12-405	PDL15	LINE 15 PELLET DRYER	None	None	3.5 tons/hour	N/A
12-406	PDL16	LINE 16 PELLET DRYER	None	None	3.5 tons/hour	N/A
12-409	IMP MOD DC	IMPACT MODIFIER DUST COLLECTOR	None	Filter	3.25 tons/hour	N/A
12-411	L8-13DC	L8-13 DUST COLLECTOR SYSTEM BLOWER K-002	None	Filter	1 tons/hour	N/A
12-412	SILOJ/KVB	SILO J & K DUST COLLECTOR	None	Filter	3 tons/hour	N/A
12-413	MICASILOF K	MICA SILO FLEX KLEEN	None	Filter	2 tons/hour	N/A
12-414	L5BS	LINE 5 BLENDER SURGE HOPPER	None	None	1 tons/hour	N/A
12-415	L6BSDC	L6 BLENDER SURGE HOPPER	None	None	1 tons/hour	N/A
12-416	RBCH	BAGGER-1 BUSTED BAG RECEIVER	None	None	0.5 tons/hour	N/A
12-417	CFPD1F	CONAIR / FRANKLIN DRYER	None	None	0.0855 tons/hour	N/A
12-418	CFPD2F	CONAIR / FRANKLIN DRYER	None	None	0.0855 tons/hour	N/A
12-419	L16ROTO	LINE 16 ROTOCLONE	None	None	3.75 tons/hour	N/A
12-420	L17ROTO	LINE 17 ROTOCLONE	None	None	3.75 tons/hour	N/A
12-421	L5 S/U REC	LINE 5 STARTUP RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-422	L5 RECYC	LINE 5 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-423	L5FRCF	LINE 5 FR HOPPER	None	None	2 tons/hour	N/A
12-424	L6 REC	LINE 6 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-425	L6FRCF	LINE 6 FR HOPPER	None	None	2 tons/hour	N/A
12-426	L6 S/U REC	LINE 6 STARTUP RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-427	L7 S/U REC	LINE 7 STARTUP RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-428	L8 L/KM	V920 LINE 8 MISC VESSEL	None	None	2 tons/hour	N/A
12-429	L8 S/U REC	V921 LINE 8 STARTUP VESSEL	None	None	2 tons/hour	N/A
12-436	L10 FR	L10 FLAME RETARDANT BIN	None	None	2 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
12-438	L10 REC	LINE 10 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-439	L10 S/U	LINE 10 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-440	L11REC	LINE 11 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-441	L11S/UREC	LINE 11 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-442	L11FR	LINE 11 FR HOPPER	None	None	2 tons/hour	N/A
12-443	L12 S/U	LINE 12 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-444	L13S/U	LINE 13 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-447	L18 S/U	V-1802 LINE 18 STARTUP RECYCLE VENT	None	None	3 tons/hour	N/A
12-448	L19 S/U	V-1903 LINE 19 STARTUP RECYCLE VENT	None	None	3 tons/hour	N/A
12-449	L7APH	LINE 7A PACKING HOPPER	None	None	1.5 tons/hour	N/A
12-451	L5PH	LINE 5 PACKING HOPPER	None	None	1.5 tons/hour	N/A
12-452	L6PH	LINE 6 PACKING HOPPER	None	None	1.5 tons/hour	N/A
12-453	PROD BLEND	PK1 PRODUCT BLENDER - FOR ALL LINES	None	None	3 tons/hour	N/A
12-454	L7VB	LINE 7 V - BIN	None	None	1.5 tons/hour	N/A
12-455	PK1V507	PK1 V-507	None	None	1.5 tons/hour	N/A
12-461	B1B2LEXH	B1, B2 LEXAN# PELLET HOPPER	None	None	1.5 tons/hour	N/A
12-462	A1A2LPH	A1, A2 LEXAN# PELLET HOPPER	None	None	1.5 tons/hour	N/A
12-468	PIGROTO	PIGMENT ROOM ROTOCLONE	None	None	less than 100 lbs/hr	N/A
12-471	MISC VENT	LINE 7 ROTOCLONE EXHAUST	None	None	less than 100 lbs/hr	N/A
12-477	L6 315FK	L6 315 FLEX KLEEN	None	None	2 tons/hour	N/A
12-478	L6 195FK	L6 195 BIN EXHAUST	None	None	2 tons/hour	N/A
12-480	L7 FR	L7 FIRE RESISTANT BIN	None	None	2 tons/hour	N/A
12-481	L7RECYC	L7 RECYCLE BIN	None	None	2 tons/hour	N/A
12-482	L7 315BH	LINE 7 315 BAGHOUSE	None	Filter	2 tons/hour	N/A
12-483	L7 195BH	LINE 7 195 BAGHOUSE	None	Filter	2 tons/hour	N/A
12-484	L6-MICA	LINE 6 ROOF TOP MICA HOPPER	None	Filter	1 tons/hour	N/A
12-485	L10 195SEM	LINE 10 RESIN 195 HOPPER	None	Filter	2 tons/hour	N/A
12-486	L10 315BH	LINE 10 RESIN 315 HOPPER	None	Filter	2 tons/hour	N/A
12-488	L11 195BH	LINE 11 RESIN 195 HOPPER	None	Filter	2 tons/hour	N/A
12-489	L11 315BH	LINE 11 RESIN 315 HOPPER	None	Filter	2 tons/hour	N/A
12-490	CL4 RECYC	CL4 RECYCLE BIN	None	None	0.5 tons/hour	N/A
12-491	CL4FR	CL4 FIRE RESISTANT BIN	None	None	0.5 tons/hour	N/A
12-494	CL5-7FK195	CL 5195 FLEX KLEEN	None	None	0.5 tons/hour	N/A
12-495	CL5315FK	CL5 315 FLEX KLEEN	None	Filter	0.5 tons/hour	N/A
12-497	L17REC	LINE 17 RECYCLE	None	None	2.5 tons/hour	N/A
12-498	L17FR	L17 FIRE RESISTANT	None	None	2.5 tons/hour	N/A
12-499	PK3VACB	VACUUM BLOWER PK3 SYSTEM	None	Filter	4 tons/hour	N/A
12-500	V-300A	PACK 3 PELLET HOPPER 1	None	None	4 tons/hour	N/A
12-501	V-300B	PACK 3 PELLET HOPPER 2	None	None	4 tons/hour	N/A
12-502	V-300E	PACK 3 PELLET HOPPER 3	None	None	4 tons/hour	N/A
12-503	V-302A	PACK 3 PELLET HOPPER 4	None	None	4 tons/hour	N/A
12-504	V-302B	PACK 3 PELLET HOPPER 5	None	None	4 tons/hour	N/A
12-506	PK3 V-BIN	PACK 3 V-BIN (V-304)	None	None	4 tons/hour	N/A
12-507	L8AVB	LINE 8A V-BIN 830	None	None	2 tons/hour	N/A
12-508	L8BVB	LINE 8B V-BIN 840	None	None	2 tons/hour	N/A
12-509	L12VBA	LINE 12A V-BIN	None	None	1.5 tons/hour	N/A
12-510	L12VBB	LINE 12B V-BIN	None	None	1.5 tons/hour	N/A
12-511	L13VBA	LINE 13A V-BIN	None	None	1.5 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
12-512	L13VBB	LINE 13B V-BIN	None	None	1.5 tons/hour	N/A
12-515	L12 BH	LINE 12 PACKAGING HOPPER	None	None	1.5 tons/hour	N/A
12-516	L16ABH	LINE 16A BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-517	L13BH	LINE 13 PACKAGING HOPPER	None	None	1.5 tons/hour	N/A
12-518	L17ABH	LINE 17A BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-519	L15BHA	LINE 15 BAGGING HOPPER A	None	None	3.25 tons/hour	N/A
12-520	L15BHB	LINE 15 BAGGING HOPPER B	None	None	3.25 tons/hour	N/A
12-521	L18BH	LINE 18 BAGGING HOPPER	None	None	3.25 tons/hour	N/A
12-522	L17BBH	LINE 17B BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-523	L16BBH	LINE 16B BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-524	CL15-16 EF	LINE 15/16 SYSTEM/EXHAUST	None	None	0.25 tons/hour	N/A
12-526	L17-EF	LINE 17 EXHAUST FAN	None	None	0.25 tons/hour	N/A
12-533	BLS-E	BULK LOADING SILO E BIN VENT	None	None	3 tons/hour	N/A
12-534	BLS-F	BULK LOADING SILO F BIN VENT	None	None	3 tons/hour	N/A
12-535	BLS-G	BULK LOADING SILO G BIN VENT	None	None	3 tons/hour	N/A
12-536	BLS-H	BULK LOADING SILO H BIN VENT	None	None	3 tons/hour	N/A
12-537	BLSDEF-E	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-538	BLSDEF-F	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-539	BLSDEF-G	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-540	BLSDEF-H	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-541	BLSW-E	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-542	BLSW-F	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-543	BLSW-G	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-544	BLSW-H	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-545	BLSE-E	BLS LOADING EXHAUST E	None	None	10 tons/hour	N/A
12-546	BLSE-F	BLS LOADING EXHAUST F	None	None	10 tons/hour	N/A
12-547	BLSE-G	BLS LOADING EXHAUST G	None	None	10 tons/hour	N/A
12-548	BLSE-H	BLS LOADING EXHAUST H	None	None	10 tons/hour	N/A
12-564	L5RBA	LINE 5 RESIN BIN A 195	None	Filter	2 tons/hour	N/A
12-565	L5RBB	LINE 5 RESIN BIN B 315	None	Filter	2 tons/hour	N/A
12-566	L7RBA	LINE 7 RESIN BIN A 195	None	Filter	2 tons/hour	N/A
12-567	L7RBB	LINE 7 RESIN BIN B 315	None	Filter	2 tons/hour	N/A
12-568	V-1930	LINE 19 RESIN BIN A 195	None	Filter	2 tons/hour	N/A
12-571	V-1926	LINE 19 PACKAGING HOPPER	None	None	2 tons/hour	N/A
12-573	V-451	LINE CL2 BAGGING HOPPER	None	None	2 tons/hour	N/A
12-574	V-450	LINE CL4 BAGGING HOPPER	None	None	2 tons/hour	N/A
12-575	V-1924	LINE 19 BAGGING HOPPER A	None	None	2 tons/hour	N/A
12-576	V-1925	LINE 19 BAGGING HOPPER B	None	None	2 tons/hour	N/A
12-578	L12FR	LINE 12 FR HOPPER	None	None	0.15 tons/hour	N/A
12-580	L12RECYC	LINE 12 RECYCLE HOPPER	None	None	0.3 tons/hour	N/A
12-584	L7BLEND	LINE 7 BLENDER	None	None	0 tons/hour	N/A
12-585	L19BLEND	LINE 19 BLENDER	None	None	1.5 tons/hour	N/A
12-588	BPC	BERRINGER PARTS CLEANER - OLD	None	None	0 tons/hour	N/A
12-589	L13FR	LINE 13 FR HOPPER	None	None	1.5 tons/hour	N/A
12-590	L13REC	LINE 13 RECYCLE HOPPER	None	None	1.5 tons/hour	N/A
12-591	L13PET	LINE 13 PET HOPPER	None	None	1.5 tons/hour	N/A
12-592	L13M	LINE 13 MISC. HOPPER	None	None	1.5 tons/hour	N/A
12-593	L11VB	LINE 11 V-BIN	None	None	1.5 tons/hour	N/A
12-594	L11BH	LINE 11 BAGGING HOPPER	None	None	1.5 tons/hour	N/A
12-596	L10VB	LINE 10 V-BIN	None	None	1.5 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
12-597	L10PH	LINE 10 PACKAGING HOPPER	None	None	1.5 tons/hour	N/A
12-599	L8LPFB	L8 LEXAN# POWDER DAY BIN BAG FILTER B	None	Filter	1.5 tons/hour	N/A
12-600	L8KMV	V-1515B LINE 8 KM VESSEL	None	None	0.5 tons/hour	N/A
12-601	V-1913	V-1913 LEXAN# POWDER BIN	None	None	1.5 tons/hour	N/A
12-602	L18/19DC	LINE 18/19 DUST COLLECTOR	None	Filter	less than 100 lbs/hr	N/A
12-603	L8PH	V8-50 LINE PACK HOPPER	None	None	2 tons/hour	N/A
12-604	V-1403	V-1402 195 HOPPER (FINE GRINDS)	None	None	2 tons/hour	N/A
12-605	V-1407	V-1407 315 HOPPER (FINE GRINDS)	None	None	2 tons/hour	N/A
12-606	CL5FR	CL5 FR HOPPER	None	None	0.5 tons/hour	N/A
12-607	TMTCB	TMTC SILO B	None	Filter	4 tons/hour	N/A
12-608	V-1905	V-1905 LEXAN# POWDER BIN	None	None	1.5 tons/hour	N/A
12-610	BPC NEW	BERRINGER PARTS CLEANER - NEW	None	None	0 tons/hour	N/A
12-611	MDB K-100	METAL DETECTOR BLOWER K-100	None	Filter	6 tons/hour	N/A
12-612	MDB K-101	METAL DETECTOR BLOWER K-101	None	Filter	6 tons/hour	N/A
12-613	F30002	LINE 7 FR25 DUST COLLECTOR F30002	None	Filter	2 tons/hour	N/A
12-614	F30003	LINE 15 FR25 DUST COLLECTOR F30002	None	Filter	2 tons/hour	N/A
12-615	BAG2 BBR	BAGGER-2 BUSTED BAG RECEIVER	None	None	0.5 tons/hour	N/A
12-616	BAG3 BBR	BAGGER-3 BUSTED BAG RECEIVER	None	None	0.5 tons/hour	N/A
12-617	B-5000D	215 HPR BLOWER B-5000D	None	Filter	3 tons/hour	N/A
12-618	B-30001	PET TRANSFER BLOWER B-30001	None	Filter	3 tons/hour	N/A
12-619	K-3001	OFF-LINE DEMETALIZER K-3001	None	Filter	2 tons/hour	N/A
12-620	PVCS	PACKAGING VACUUM CLEANING SYSTEM	None	None	less than 100 lbs/hr	N/A
12-621	B-0201	FR SILO VACUUM BLOWER B-0201	None	Filter	3 tons/hour	N/A
12-622	L17 LPH	LINE 17 LEX POWDER HOPPER	None	None	3 tons/hour	N/A
12-623	L16 LPFR	LINE 16 LEX POWDER FILTER RECEIVER	None	Filter	3 tons/hour	N/A
12-624	L16 LPH	LINE 16 LEX POWDER HOPPER	None	None	3 tons/hour	N/A
12-625	F3150A	F3150A FINES DUST COLLECTOR	None	Filter	0.5 tons/hour	N/A
12-626	F3150B	F3150B FINES DUST COLLECTOR	None	Filter	0.5 tons/hour	N/A
12-627	F3150C	F3150C FINES DUST COLLECTOR	None	Filter	0.5 tons/hour	N/A
12-628	FH V-3000	315 FINES HOPPER V-3000	None	None	0.5 tons/hour	N/A
12-628	FH V-3002	195 FINES HOPPER V-3002	None	None	0.5 tons/hour	N/A
12-630	HB K-004	HOFFMAN BLOWER K-004	None	Filter	9 tons/hour	N/A
12-634	L7-VB	LINE 7 VACUUM BLOWER	None	Filter	2.25 tons/hour	2010

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

A.15 HPP Co-Polymer [Section P]

A.15.1 HPP Co-Polymer, Buildings 47 and 48

<u>HPP Co-Polymer Affected Facilities/Sources</u>

(a) The HPP Co-Polymer Area includes four miscellaneous organic chemical manufacturing units (MCPU) which are part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing units are identified as HppMONCoP1, HppMONCoP2, HppMONCoP3, and HppMONCoP4. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and

heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials specified in 40 CFR 63.2435(b)(1). MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to HppMONCoP1, HppMONCoP2, HppMONCoP3, and HppMONCoP4 are specified in Section V of this permit.

HPP Co-Polymer Operations

(b) The HPP Co-Polymer operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity[(c)]	Date of Construct
13-103	AVB	AUTOMATIQUE VACUUM BLOWER	None	None	1.0 tons/hour	1989
13-274	UTC CTC1	ULTEM# CO-POLYMER COOLING TOWER CELL 1	None	None	N/A	N/A
13-275	UTC CTC2	ULTEM# CO-POLYMER COOLING TOWER CELL 2	None	None	N/A	N/A
13-366	V-304	V-304 STORAGE VESSEL	None	None	2.27 m^3	2006
47A-001	10 CVR	10 CV REACTOR	WSC**	10 CV Condenser	N/A	1991
47A-001	40 CV FP	40 CV FREEZE POT	WSC**	40 CV Freeze Pot; 40 CV Condenser	N/A	1991
47A-002	HOT OIL	HOT OIL EXPANSION TANK	None	None	N/A	1991

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
13-001	V-221	REFRIGERATED CONDENSER*	None	None	N/A	N/A
13-004	J-302	VACUUM JET J-302 VENT - REFRIGERATED CONDENSER*	None	None	N/A	N/A
13-005	J-501	REFRIGERATED CONDENSER (WITH CARBON ADSORBER)*	None	None	N/A	N/A
13-005	J-502	REFRIGERATED CONDENSER (WITH CARBON ADSORBER)*	None	None	N/A	N/A
13-006	V-715	HOT OIL EXPANSION TANK VENTS	None	None	less than 40 m^3	N/A
13-008	A-208	BPA-DA BAG DUMP	None	None	less than 100 lb/hr	N/A
13-010	A-311	BPA-DA BAG DUMP	None	None	less than 100 lb/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
13-015	A-713	FUGITIVE DUST COLLECTOR	None	Filter	less than 100 lb/hr	N/A
13-027	V-514	HOTWELL (V514) VENT	None	None	less than 40 m^3	N/A
13-092	V-717	HOT OIL EXPANSION TANK	None	None	less than 40 m^3	N/A
13-169	V-4008A	MOLTON POLYMER HANDLING SYSTEM	None	None	N/A	N/A
13-250	PEWSCD	PROCESSING EQUIPMENT (WITH WATER SRUBBER AND CARBON DRUM)*	None	None	0.30 tons/hour	N/A
13-257	BF-X511	PELLETIZER RECOVERY FILTER	None	Filter	0.15 tons/hour	N/A
13-258	V-6009	MPD STORAGE TANK, V4008C	None	None	less than 40 m^3	N/A
13-259	DCS BLDG48	CENTRAL DUST COLLECTOR SYSTEM	None	Filter	less than 100 lb/hr	N/A
13-276	X-560B	VACUUM PUMP	None	None	N/A	N/A
13-362	DDDC	BPA-DA DRUMMING DUST COLLECTOR	None	Filter	less than 100 lb/hr	N/A
47A-003	DIS-8CV	DISENTRAINMENT 8CV	Carbon Canister***	8 CV Freeze Pot; 8 CV Condenser	N/A	1991

[a] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
[b]. Equipment is integral to the process operation.
[c.] When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
[d.] Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* The amount of VOC entering each of these control devices is 2.6 lb/hr VOC or less; this amount of VOC would not trigger an air regulatory requirement to install a control device. The source has installed this equipment to reduce emissions that would otherwise not require control.
** The amount of VOC entering WSC is less than 5 tons/yr; this amount of VOC would not trigger an air regulatory requirement to install a control device; however, a water scrubber (WSC) controls emissions from 10CVR and 40 CV FP to reduce emissions that would otherwise not require control.
*** The amount of VOC entering the carbon canister is less than 0.1 tons/yr; this amount of VOC would not trigger an air regulatory requirement to install a control device.

A.16 HPP ChemOps [Section Q]

A.16.1 HPP ChemOps, Buildings 58 and 59

<u>HPP ChemOps Affected Facilities/Sources</u>

(a) The HPP ChemOps area includes process heaters, identified as H-900 and H-900B, which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters

subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-900 and H-900B are specified in Section D of this permit.

(b) The HPP ChemOps Area includes two miscellaneous organic chemical manufacturing units (MCPU) which are part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing units are identified as HppMONMon1 and HppMONPol1. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials in 40 CFR 63.2435(b)(1). MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to HppMONMon1 and HppMONPol1 are specified in Section V of this permit.

(c) [Reserved]

(d) The affected facilities subject to 40 CFR 60, Subpart Dc are identified as H-900 and H-900B. The affected facility is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

HPP ChemOps Operations

(e) The HPP ChemOps operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity[(c)]	Date of Construct
13-042	V-500A[(f)]	DA HOLD TANK	None	None	57.5 m^3	1985
13-042	V-500B[(f)]	DA HOLD TANK	None	None	57.5 m^3	1985
13-042	C1011	TT-604, C1011 VENT HEADER	None	None	N/A	N/A
13-044	V-700	MT-701, V-700 STORAGE TANK	None	None	57.0 m^3	1985
13-046	V-730	ODCB TANK	None	None	76.3 m^3	1985
13-049	H-900	HOT OIL BURNER H900	None	None	28.8 mmBtu/hr	N/A
13-056	S-800	JC-803, S-800 TOLUENE SUMP	Condenser C801	None	N/A	N/A
13-057	V-830[(f)]	WASTEWATER SURGE TANK	None	None	67 m^3	1985

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
13-057	C-861	V840 DRUM VENT	None	None	N/A	N/A
13-058	V-904	V904 HOT OIL STORAGE	None	None	90.6 m^3	1985
13-059	V-903	V903 HOT OIL EXPANSION	None	None	N/A	N/A
13-062	PI/MMA HD	HC-612A&B SWITCH CONDENSERS	Scrubber PI/MMA HD	None	N/A	N/A
13-155	SC-1/2	NOx CONTAINMENT SYSTEM	None	None	N/A	N/A
13-172	MS-361	PI STORAGE	None	None	N/A	N/A
13-272	ULC CTC1	HPP CHEM-OPS COOLING TOWER CELL 1	None	None	N/A	N/A
13-273	ULC CTC2	HPP CHEM-OPS COOLING TOWER CELL 2	None	None	N/A	N/A
13-279	V-790	STORAGE TANK	None	None	N/A	N/A
13-290	S-800B	TOLUENE WASTEWATER TANK	None	None	N/A	N/A
13-319	CTCC3	COOLING TOWER CELL C3	None	None	N/A	N/A
13-320	CTCC4	COOLING TOWER CELL C4	None	None	N/A	N/A
13-321	H-900B	NEW HOT OIL BURNER	None	None	31.9 mmBtu/hr	N/A
13-322	V-903B	NEW HOT OIL EXPANSION DRUM	None	None	N/A	N/A
13-323	V-904B	NEW HOT OIL STORAGE TANK	None	None	93.1 m^3	2000
13-346	C-1001[e]	VENT CONDENSER	H-2100 Oxidizer	None	N/A	N/A
13-346	C-1021[e]	VENT CONDENSER	H-2100 Oxidizer	None	N/A	N/A
13-346	S-801[e]	LIFT STATION	H-2100 Oxidizer	None	N/A	N/A
13-346	T-105[e]	WASTEWATER STRIPPER	H-2100 Oxidizer	None	N/A	N/A
13-346	V-250[f]	BI SURGE TANK	None	None	64 m^3	1985
13-346	V-240[f]	BI WATER-WASH TANK	None	None	55 m^3	1985
13-346	V-130[f]	NPI SURGE TANK	None	None	61.7 m^3	1985
13-346	V-223[f]	TOLUENE/WATER DECATNER	None	None	57.8 m^3	1985
13-346	V-273[f]	DRY TOLUENE SURGE TANK	None	None	40.1 m^3	1985
13-347	C-1001[e]	VENT CONDENSER (AOS)	None	None	N/A	N/A
13-347	C-1021[e]	VENT CONDENSER (AOS)	None	None	N/A	N/A
13-347	S-801[e]	LIFT STATION (AOS)	None	None	N/A	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
13-347	T-105[e]	WASTEWATER STRIPPER (AOS)	None	None	N/A	N/A
13-364	V-715	V-715 STORAGE TANK	None	None	24.6 m^3	2005
13-365	V-750B	CONTAMINATED TOLUENE TANK	Condenser C751B	None	89.0 m^3	1985
Insignificant Activities [d]						
13-045	V-710	MPD STORAGE TANK	None	None	N/A	N/A
13-050	F-785	BPA SILO VENT FILTER	None	Filter	4.96 tons/hr	N/A
13-055	S-810	JC-802, S810 SUMP	None	None	N/A	N/A
13-060	V-965	V965 REFRIGERANT EXPANSION TANK	None	None	N/A	N/A
13-061	V-905	MS-911 TEMPERED OIL EXPANSION TANK, V-905	None	None	N/A	N/A
13-063	V-740[f]	MMA STORAGE TANK	None	None	44.4 m^3	1985
13-063	T-744	AS701 VENT SCRUBBER T744[g]	None	None	N/A	N/A
13-064	D-390	FLAKER DUST COLLECTOR	None	Filter	1.0 tons/hr	N/A
13-075	W-515	DI-AMINE WEIGH TANK	None	None	N/A	N/A
13-148	541-T	541-T RAT TANK	None	None	N/A	N/A
13-150	571-T	STORAGE TANK (86%)	None	None	N/A	N/A
13-170	BSST	BULK SALT STORAGE TANK	None	Filter	24.96 tons/hr	N/A
13-261	V-900	INCINERATOR WASTE STOR TANK	None	None	N/A	N/A
13-262	V-79T	CLOTH WASH	None	None	N/A	N/A
13-263	BF-R230MD	MANUAL DUMPER BAG FILTER	None	Filter	N/A	N/A
13-265	V-570A	PRODUCT VERIFICATION BIN	None	None	2.25 tons/hr	N/A
13-266	V-570B	PRODUCT VERIFICATION BIN	None	None	2.25 tons/hr	N/A
13-267	X-560	PELLET TRANSFER SYSTEM	None	None	2.25 tons/hr	N/A
13-270	UMDGFT	HPP MONOMER DIESEL GENERATOR TANK	None	None	N/A	N/A
13-278	F400V	F400 SYSTEM VENTILATION	None	None	N/A	N/A
13-284	S-810B	ODCB WASTEWATER TANK	None	None	N/A	N/A
13-340	PABDS	PA BAG DUMP STATION	None	None	Less Than 0.05 tons/hr	N/A
13-341	F-205B	BPA SURGE BIN VENT FILTER	None	Filter	3.6 tons/hr	N/A
13-342	MBLV	MAINTENANCE BLDG LOCAL VENT	None	None	N/A	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
13-343	MBRV	MAINTENANCE BLDG ROOF VENT	None	None	N/A	N/A
13-354	102-T/B	JACK TANK #3	None	None	N/A	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))
e. The Permittee has the option to vent emission units C-1001, C-1021, S-801, and T-105 to the oxidizer H-2100 or to the atmosphere.
f. Tanks V-500A and V-500B are part of emission unit C1011. Tanks V-273, V-250, V-240, V-130, and V-223 are part of emission unit C-1001. Tank V-830 is part of emission unit C-861. Tank V-740 is part of emission unit T-744.
g. T744 is a safety system integral to process operations and is not considered a control or recovery device.

Notes: The detailed calculations including emission factor information of the emission units included in this Section Q is treated as confidential information.

For purposes of this permit section, the pounds of steam usage and the fugitive VOC emissions which are both associated with this HPP operation are termed HppSTEAM and FUG, respectively.

Weight hopper recovery filter, identified as F-205; PA/MPD melter and charge tank, identified as V-1565B; separator, identified as KO-500; cloth wash section tank #2, identified as T-79B; and final wash receiver #2, identified as T-70B are considered trivial activities (326 IAC 2-7-1(40)) and were authorized to be built under CP-129-10588-00002, issued on August 24, 1999, but may not have been built. The V-1050 scrubber identified as V-1550 is considered inoperable. The jack tank 1, identified as 100-T, is operable and is routed to the NO_X containment system, identified as SC-1/2. The jack tank 2, identified as 102-T; and the final wash receiver, identified as T-70 are considered operable and have been rerouted to the NO_X containment system, identified as SC-1/2.

A.17 HPP Finishing [Section R]

A.17.1 HPP Finishing, Building 62

<u>HPP Finishing Operations</u>

(a) The HPP Finishing operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
13-035	DC-08	LARGE FINE GRINDER	None	None	0.60 tons/ hour	N/A

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
13-070	B-02	B-02 BLOWER	None	Filter	3.78 tons/ hour	1985
13-071	B-01	B-01 BLOWER	None	Filter	3.78 tons/ hour	1985
13-154	C1 DHE	C1 DIE HEAD EXHAUST	None	None	Less Than 0.05 tons/ hour	N/A
13-165	L-3	PELLET TRANSFER	None	Filter	1.25 tons/ hour	N/A
13-166	L-4	PELLET TRANSFER	None	Filter	1.25 tons/ hour	N/A
13-167	RTV	RESIN TRANSFER VENT	None	Filter	2.50 tons/ hour	N/A
13-168	FPT	FINISHED PRODUCT TRANSFER	None	Filter	1.25 tons/ hour	N/A
13-251	BF-L1	LINE 1 PELLET TRANSFER	None	Filter	0.23 tons/ hour	N/A
13-252	BF-L2	LINE 2 PELLET TRANSFER	None	Filter	0.23 tons/ hour	N/A
13-254	BF-NFG	EAST FINE GRINDER	None	Filter	0.60 tons/ hour	N/A
13-255	CLDC	COLOR LAB DUST COLLECTION	None	Filter	0.07 tons/ hour	N/A
13-256	A/B - FG	WEST FINE GRINDER	None	Filter	1.20 tons/ hour	N/A

[a] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
[b] Equipment is integral to the process operation.
[c] When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
[d] Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

A.18 Emergency Generators and Pumps [Section S]

A.18.1 Emergency Generators and Pumps, Entire Plant Site

Emergency Generators and Pumps

(a) The site generators and pumps listed below are considered the emergency generators and pumps identified as a group, 17-Emer-G. Each emergency generator or pump which is associated with this group is individually identified with an affiliated stack/vent I.D; plant location; date in which the emergency generator or pump was installed; rated horsepower (hp); and heat input.

Stack / Vent I.D	Plant Location	Date Installed	Rated HP	MMBTU/hr
GENERATORS				
17-101	Phenol	Jun-83	760	5.3
17-102	Phenol	Oct-83	450	3.2
17-103	MWTP	Aug-82	900	6.3
17-104	BPA III	Apr-86	1490	10.4
17-105	LEXAN# Resin	Nov-86	1770	12.4
17-106	LEXAN# Resin	Nov-86	1770	12.4
17-107	LEXAN# Resin	Jun-79	930	6.5
17-108	BPA I & II	Feb-82	17	0.1
17-110	LDF	Sep-86	760	5.3
17-111	LDF	Sep-86	760	5.3
17-112	Phosgene	May-80	1600	11.2
17-113	Phosgene	Oct-86	1490	10.4
17-114	Brine	Dec-85	1770	12.4
17-115	Brine	Jan-87	1770	12.4
17-120	ETS	1991	119	0.8
17-121	ULTEM# Monomer	May-90	900	6.3
17-129[(a)]	Sheet Products	1980	10	0.1
17-130	Sheet Products	Mar-95	60	0.4
17-134	CPP Resin II	Jan-95	1503	10.5
17-135	Bldg. 46 ECC	Feb-96	120	0.8
17-410	Visitor Center	1999	158	1.1
PUMPS				
17-302	Phenol	Jun-90	280	2
17-303	Phenol	Jun-90	280	2
17-304	Phenol	Jun-90	280	2
17-411	Mil Water Diesel Pump	1999	300	2.1
17-412	Mil Water Diesel Pump	1999	300	2.1
17-413	Mil Water Diesel Pump	1999	300	2.1
FIRE PUMPS				
17-403	CT#2	1970	220	1.5
17-404	CT#2	1970	220	1.5
17-405	MWTP/BPA	Jan-74	280	2
17-406	MWTP/Bldg. 18	Jun-78	310	2.2
17-407	MWTP/Bldg. 18	Jun-78	310	2.2
17-408	Safety/Phenol	Apr-89	340	2.4
17-409	Safety/Phenol	Apr-89	340	2.4

(a) Stack/Vent ID 17-129 is associated with a gasoline emergency generator; all other emergency generators or pumps listed in this table burn diesel.

Standby Energy Curtailment Generators and Mobile Diesel Units

(b) The generators and mobile diesel units listed below are considered the energy curtailment generators and mobile diesel units identified as a group, 17-S_M-G. Each energy curtailment generator or mobile diesel unit which is associated with this group is individually identified with an affiliated stack/vent I.D; plant location; date in which the energy curtailment generator or mobile diesel unit was installed; rated horsepower (hp); and heat input.

Stack / Vent I.D	Plant Location	Date Installed	Rated HP	MMBTU/hr
STANDBY ENERGY CURTAILMENT DIESEL GENERATORS AND MOBILE DIESEL UNITS				
17-116	CPP Resin III	1984	1580	11.2
17-117	CPP Resin III	1984	1580	11.2
17-118	WWTP Lift Station	1990	2220	15.7
17-119	WWTP Lift Station	1990	2220	15.7

Temporary, Portable, Emergency Generators

(c) The generators listed below represent temporary, portable, emergency generators. Each emergency generator is individually identified with an affiliated stack/vent I.D.; plant location; rated horsepower (hp); and heat input. Generator units may vary depending upon which units are available when needed.

Stack / Vent I.D	Emission Unit / Description	Plant Location	Maximum HP	Maximum Heat Input (MMBtu/hr)
17-500	17-500 / Emergency Generator	AS NEEDED - Portable	2,332	15.22
17-501	17-501 / Emergency Generator	AS NEEDED - Portable	2,332	15.22

A.19 High Bay [Section T]

A.19.1 High Bay, Building 1A

High Bay Operations

(a) The High Bay operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
18-001	R104OD	ROOM 104 OVEN DRYERS	None	None	less than 100 lbs/hr	N/A
18-002	R102E	ROOM 102 EXTRUDERS	None	None	less than 100 lbs/hr	N/A
18-004	PRODEX S4E	PRODEX S-4 EXTRUDER	None	None	less than 100 lbs/hr	N/A
18-005	EGAN S5	EGAN S-5 EXTRUDER	None	None	less than 100 lbs/hr	N/A
18-006	HPM(S6)E	HPM S-6 EXTRUDER	None	None	less than 100 lbs/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
18-007	R105/102VB	R105/102 VACUUM BLOWER	None	None	less than 100 lbs/hr	N/A
18-008	R103BVS	LEXAN# BLEND ROOM AND POWDER TRANSFER	None	Baghouse	less than 100 lbs/hr	N/A
18-010	R102EV	ROOM 102 EXTRUDERS VACUUM	None	None	less than 100 lbs/hr	N/A
18-011	B1BMMO	BLDG. 1B MOLDING MACHINES/OVENS	None	None	less than 100 lbs/hr	N/A

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

A.20 Wastewater Treatment Plant [Section U]

A.20.1 Wastewater Treatment Plant

Wastewater Treatment Plant (WWTP) Operations

(a) The Wastewater Treatment Plant (WWTP) operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
16-100	WWTP*	SITE WASTEWATER TREATMENT PLANT	None	None	N/A	N/A

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
16-101	PAC SVF**	PAC SILO VENT FILTER	None	Filter	8 tons/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).

* The wastewater treatment plant area consists of circular clarifiers, rectangular equalization basins, aeration basins, three six-million gallon open-top impoundment tanks, and other wastewater treatment system equipment.

**The emission unit identified as PAC SVF is a powdered activated carbon storage silo with a bin vent filter. The carbon is pneumatically transferred from the truck to the silo and the filter, which is integral to the process, because the filter is needed to separate the carbon from the transfer air.

A.21 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Space heaters, process heaters, or boilers using the following fuels:

(1) Natural gas fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.

(3) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.

(b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu per hour.

(c) Combustion source flame safety purging on startup.

(d) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(f) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(2) Vessels storing lubricating oils, hydraulic oils, machining oils and machining fluids.

(g) Refractory storage not requiring air pollution control equipment.

(h) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(i) Machining where an aqueous cutting coolant continuously floods the machining interface.

(j) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(k) Cleaners and solvents characterized as follows:

(1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100 F) or;

(2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20 degrees C (68F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(l) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment.

(m) Closed loop heating and cooling system.

(n) Infrared cure equipment.

(o) Any of the following structural steel and bridge fabrication activities:

(1) Cutting 20,000 linear feet or less of one inch (1”) plate or equivalent per year.

(2) Using 80 tons or less of welding consumables per year.

(p) Rolling oil recovery systems.

(q) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(r) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(s) Water runoff ponds for petroleum coke-cutting and coke storage piles.

(t) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility.

(u) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.

(v) Forced and induced draft cooling tower system not regulated under a NESHAP.

(w) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(x) Heat exchanger cleaning and repair.

(y) Process vessel degassing and cleaning to prepare for internal repairs.

(z) Trimmers that do not produce fugitive emissions and are equipped with a dust collection or trim material recovery device, such as a bag filter or cyclone. [326 IAC 6-3-2]

(aa) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(bb) Conveyors as follows:

(1) Covered conveyors for coal or coke conveying of less than or equal to 360 tons per day;

(2) Uncovered coal conveying of less than or equal to 120 tons per day.

(3) Underground conveyors.

(4) Enclosed systems for conveying plastic raw materials and plastics finished goods.

(cc) Coal bunker and coal scale exhausts and associated dust collector vents.

(dd) Asbestos abatement projects regulated by 326 IAC 14-10. [326 IAC 14-10]

(ee) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production processes.

(ff) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(gg) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(hh) On-site fire and emergency response training approved by the department.

(ii) Diesel generators not exceeding 1600 horsepower.

(jj) Stationary fire pump engines.

(kk) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]

(ll) Purge double block and bleed valves.

(mm) Filter or coalescer media changeout.

(nn) Vents from ash transport systems not operated at positive pressure.

(oo) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C).

(pp) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(qq) Farm operations.

A.22 Plant-MON [Section V]

A.22.1 Plant-MON Affected Facilities/Sources

(a) Plant-MON identifies the affected source subject to 40 CFR 63, Subpart FFFF. Plant-MON is the facility wide collection of MCPUs and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials specified in 40 CFR 63.2435(b)(1) that are not otherwise exempted from the requirements of 40 CFR 63, Subpart FFFF. An MCPU includes equipment necessary to operate the miscellaneous organic chemical manufacturing process, as defined in 40 CFR 63.2550, and includes assigned storage tanks and product transfer racks, equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater, and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in 40 CFR 63.2435(b)(1)(i) through (v). MCPUs subject to 40 CFR 63, Subpart FFFF are identified below:

(1) CppMONRes3 identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces CPP Resin. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-311	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104B	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104A	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-600	Pure THF Tank
CppMONRes3	Group 2 Storage Tank	N/A	TK-106	Resin II Recycle Butanediol Storage Tank
CppMONRes3	Group 1 Transfer Rack	Vapor Balancing	Station #12	Methanol Railcar Loading Facility
CppMONRes3	Group 1 Transfer Rack	Vapor Balancing	Station #13	Methanol Railcar Loading Facility
CppMONRes3	Group 1 Transfer Rack	Vapor Balancing	THF Truck Loading Station	THF Truck Loading Station
CppMONRes3	Group 2 Transfer Rack	N/A	2" PMP-8009-B8C & -8010-B8C	2" PMP-8009 & -8010-B8C
CppMONRes3	Group 2 Transfer Rack	N/A	1"-PBC-8091-BED	1"-PBC-8091-BED
CppMONRes3	Group 1 Continuous Process Vent	C-410 (Water Scrubber)	E-415	Methanol Vent Condenser

MCPU	Process Activity	Controlled By	ID	Description
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-304B	BD Collection Vessel Vent
CppMONRes3	Group 2 Continuous Process Vent	N/A	E-322	E-322 Vent Condenser on V-320 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-330	V-330 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-340	V-340 Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-360	V-360 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-364	V-364 Effluent Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-450	V-450 Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-460	V-460 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	E-314	E-314 Vent Condenser on C-310 Column
CppMONRes3	Heat Exchange System	N/A	CPP Cooling Tower System	N/A
CppMONRes3	Equipment Subject to Leak Detection and Repair Requirements	Various	Various	LDAR Equipment in CppMONRes3
CppMONRes3	Group 2 Wastewater Stream	N/A	4" WW-9031A	Water Scrubber C-501 Process Wastewater Stream
CppMONRes3	Group 2 Wastewater Stream	N/A	2"WM-8498-BBA3	Water Scrubber C-410 Process Wastewater Stream
CppMONRes3	Maintenance Wastewater	N/A	N/A	CppMONRes3 Subpart FFFF Maintenance Wastewater

(2) HppMONCoP1, HppMONCoP2, HppMONCoP3 and HppMONCoP4 identify MCPUs, as specified in 40 CFR 63.2435(b), that produce HPP Co-Polymer and conduct solvent recovery. HppMONCoP1, HppMONCoP2, HppMONCoP3 and HppMONCoP4 are located in HPP Co-Polymer. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
HppMONCoP1	Group 2 Continuous Process Vent	N/A	V-501	Filmtruder Spray Condenser Vent
HppMONCoP1	Group 2 Continuous Process Vent	N/A	E-1053	Condenser Vent
HppMONCoP2	Group 2 Storage Tank	N/A	V-304	Aniline Storage Tank
HppMONCoP2	Group 2 Storage Tank	N/A	V-4008A	PPD Storage Tank
HppMONCoP3	Group 2 Continuous Process Vent	N/A	V-324	Knock-out Pot Vent Emission Point 13-105
HppMONCoP1 HppMONCoP2 HppMONCoP3 HppMONCoP4	Heat Exchange System	N/A	Co-Polymer Cooling Tower System	N/A
HppMONCoP1 HppMONCoP2 HppMONCoP3 HppMONCoP4	Maintenance Wastewater	N/A	N/A	HppMONCoP1-4 Subpart FFFF Maintenance Wastewater

HppMONCoP2	Equipment Subject to Leak Detection and Repair Requirements	Various	Various	LDAR Equipment in HppMONCoP2

(3) HppMONMon1 identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the HPP monomer. HppMONMon1 is located in HPP ChemOps. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
HppMONMon1	Heat Exchange System	N/A	HPP Cooling Tower System	N/A
HppMONMon1	Group 2 Wastewater Stream	N/A	2"-SPN-S11-7612	V-100 Secondary Evaporator Bottoms
HppMONMon1	Maintenance Wastewater	N/A	N/A	HppMONMon1 Subpart FFFF Maintenance Wastewater

(4) HppMONPol1 identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the HPP polymer. HppMONPol1 is located in HPP ChemOps. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
HppMONPol1	Surge Control Vessel	Routed Back to Process	V-223	Toluene/Water Decanter
HppMONPol1	Surge Control Vessel	Routed Back to Process	V-250	UP03-112 BI Surge Tank
HppMONPol1	Surge Control Vessel	Routed Back to Process	V-970	Concentrated Waste Storage Tank
HppMONPol1	Bottoms Receiver	Routed Back to Process	V-273	Dry Toluene Surge Tank
HppMONPol1	Bottoms Receiver	Routed Back to Process	V-130	NPI Surge Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-336	TEA Addition Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-700	PA Storage Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-715	Aniline Storage Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-750B	Contaminated Toluene Tank
HppMONPol1	Group 1 Continuous Process Vent	H-2100 (Catalytic Oxidizer)	H-2100 Inlet	H-2100 Inlet
HppMONPol1	Group 2 Continuous Process Vent	N/A	C-1011	ODCB Vent Tank Condenser - Process Side
HppMONPol1	Group 2 Continuous Process Vent	N/A	C-861	Stripper Vent Condenser - Process Side
HppMONPol1	Group 2 Continuous Process Vent	N/A	600 Area Vent	First NMP Reactor
HppMONPol1	Process Vent with Hydrogen Halide and Halogen HAP	N/A	H-2100 Inlet	H-2100 Inlet
HppMONPol1	Group 2 Transfer Rack	N/A	1 1/2"-F90-HC-SJ	Truck Loading Connection
HppMONPol1	Group 2 Transfer Rack	N/A	PH310-3"-C16-HC	Truck Loading Connection
HppMONPol1	Group 2 Transfer Rack	N/A	PH311-3"-C16-HC	Truck Loading Connection
HppMONPol1	Group 2 Transfer Rack	N/A	PH-322-2"-C16	Truck Loading Connection
HppMONPol1	Heat Exchange System	N/A	HPP Cooling Tower System	N/A

MCPU	Process Activity	Controlled By	ID	Description
HppMONPol1	Equipment Subject to Leak Detection and Repair Requirements	N/A	Various	LDAR Equipment in HppMONPol1
HppMONPol1	Group 2 Wastewater Stream	N/A	HC-1343	T-1340, TEA Stripping Column, Bottoms Interchanger
HppMONPol1	Group 2 Wastewater Stream	N/A	V-545	Drain to Manhole, ODCB Hot well
HppMONPol1	Group 2 Wastewater Stream	N/A	V-730	Dike to Sewer, Contaminated ODCB Storage Tank Dike
HppMONPol1	Group 2 Wastewater Stream	N/A	P-870A/B	Discharge to V-900, Pre-Concentrator Flash Drum
HppMONPol1	Group 2 Wastewater Stream	N/A	P-105A/B	Pumping T-105A/B Bottoms to V-105 A/B Carbon Beds, Carbon Bed Feed Pumps
HppMONPol1	Maintenance Wastewater	N/A	N/A	HppMONPol1 Subpart FFFF Maintenance Wastewater

(5) PhMON_PCP identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the PCP. PhMON_PCP is located in the Phenol Plant. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
PhMON_PCP	Group 2 Transfer Rack	N/A	SP-402	PCP Railcar Loading Arms
PhMON_PCP	Group 2 Continuous Process Vent	N/A	E-492	PCP Vent Condenser Vent
PhMON_PCP	Heat Exchange System	N/A	Phenol Plant Cooling Tower System	N/A
PhMON_PCP	Maintenance Wastewater	N/A	N/A	PhMON_PCP Subpart FFFF Maintenance Wastewater
PhMON_PCP	Equipment Subject to Leak Detection and Repair Requirements	N/A	Various	LDAR Equipment in PhMON_PCP

A.22.2 Group 1 MON Process Activities' Emission Limits and Work Practices

(a) Group 1 MON process activities that require emission limits or work practices in the affected source, Plant-MON, are identified below. Each process activity is identified with an MCPU, process activity, controlled by, ID and description.

MCPU	Process Activity	Controlled By	ID	Description
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-311	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104B	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104A	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-600	Pure THF Tank
CppMONRes3	Group 1 Continuous Process Vent	C-410 (Water Scrubber)	E-415	Methanol Vent Condenser
CppMONRes3	Group 1 Transfer Rack	Vapor Balance	Station #12	Methanol Railcar Loading Facility
CppMONRes3	Group 1 Transfer Rack	Vapor Balance	Station #13	Methanol Railcar Loading Facility

MCPU	Process Activity	Controlled By	ID	Description
CppMONRes3	Group 1 Transfer Rack	Vapor Balance	THF Truck Loading Station	THF Truck Loading Station
HppMONPol1	Group 1 Continuous Process Vent	H-2100 (Catalytic Oxidizer)	H-2100	H-2100 Inlet

A.23 COGEN [Section W]

A.23.1 COGEN AUX BOILER

(a) The natural gas-fired AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) as identified below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) This section includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section W.1 of this permit.

(c) The COGEN Project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to an affected source, as defined pursuant to the NESHAP. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is a new affected source subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section D.1 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
19-002	AUX BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-004	AUX2 BOILER*	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-005	CG1 BOILER*	Natural gas-fired boiler with low-NOx burner	None	None	249 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
* AUX2 BOILER and CG1 BOILER are part of the AOS in W.1.19.

COGEN

(a) The natural gas-fired COGEN emission unit is located in the COGEN Area as identified below. COGEN consists of a natural gas-fired turbine and a heat recovery steam generator (HRSG) with duct burner. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to the affected facility. COGEN is an affected facility pursuant to 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. The requirements of 40 CFR 60, Subpart KKKK, that are applicable to COGEN (including the HRSG with Duct Burner), are specified in this section of the permit. Because the requirements of 40 CFR 60, Subpart KKKK, apply to COGEN (including the HRSG with Duct Burner), the requirements of 40 CFR 60, Subpart Db, are not applicable to the Duct Burner.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the affected source. COGEN is an affected source pursuant to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The requirements of 40 CFR 63, Subpart YYYY, that are applicable to COGEN are specified in this section of the permit. Pursuant to 40 CFR 63.6095(d), Stay of standards for gas-fired subcategories, the COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

(d) Pursuant to the definitions contained in 40 CFR 63.7575, waste heat boilers are excluded from the definition of “boiler”. Waste heat boilers are defined to include duct burners; therefore, the HRSG, a waste heat boiler with duct burner, is not considered an affected source pursuant to 40 CFR 63, Subpart DDDDD.

(e) Pursuant to 40 CFR 63.6092, the HRSG with duct burner is not considered an affected source pursuant to 40 CFR 63, Subpart YYYY.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).	Oxidation Catalyst	None	1,812 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

A.24 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

(a) This permit, T129-30384-00002 is issued for a fixed term of five (5) years from the effective date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) The condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) The emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible

official" as defined by 326 IAC 2-7-1(35). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the effective date of the permit through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D - W of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2 7 5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) as described in 326 IAC 1 6 3 within ninety (90) days after the effective date of this permit for the emission units and air pollution control devices listed in the table below:

Permit Section	Stack vent ID	Emission Unit/APCD	Description
D.2	01-101	NE BOILER	Natural gas-fired boiler
D.2	01-014	BW GAS	Natural gas-fired boiler
D.2	01-100	H BOILER	Natural gas-fired boiler
D.3 Coal-fired (before conversion to natural gas-fired)	01-001	BW1-BOILER/ Fabric Filter	Coal-fired boiler
D.3 Coal-fired (before conversion to natural gas-fired)	01-001	BW2-BOILER/ Fabric Filter	Coal-fired boiler
D.4 Coal-fired (before conversion to natural gas-fired)	01-006	BF-ASVB (Ash handling equipment)	Bag filter for ash handling
D.3 Natural gas-fired (after conversion to natural gas-fired)	01-001	BW1-BOILER	Natural gas-fired
D.3 Natural gas-fired (after conversion to natural gas-fired)	01-001	BW2-BOILER	Natural gas-fired
E.2	03-107	PhTCU	Thermal Combustion Unit
E.4	03-008	H-530A	Waste/Gas-fired boiler
E.4	03-008	H-530B	Waste/Gas-fired boiler
F.2	04-050	H-6060	BPA III Vent Incinerator

Permit Section	Stack vent ID	Emission Unit/APCD	Description
F.2	N/A	H-383/ Condenser	Tar Cracker Phenol Condenser
G.2	05-007	V-723	RESIN II Vent Gas Absorber
G.2	05-013	V-519	RESIN I AND II Vent Gas Absorber
I.1	08-001	C-966 Scrubber	C-966 Scrubber
I.1	08-001	C-967 Scrubber	C-967 Scrubber
I.2	08-706	COS Vent Oxidizer	COS Vent Oxidizer
I.2	08-707	COS Flare	COS Flare
L.2 After Startup of SHEETFUMES TO	10-600	SHEETFUMES TO	SHEETFUMES Thermal Oxidizer
K.2	09-002	E BOILER/ BH1 Baghouse	Coal-fired boiler
K.2	09-001	BW-BOILER	Natural gas-fired boiler
K.2	09-106	R BOILER	Natural gas-fired boiler
N.3	12-560	V301/401SC	V301/401SC
Q.2	13-056	S-800/ Condenser 801C	JC-803, S-800 Toluene Sump
Q.2	13-062	Scrubber PI/MMA HD	Scrubber PI/MMA HD
Q.2	13-346	H-2100 Oxidizer	H-2100 Oxidizer
Q.2	13-365	V-750B/ C751B Condenser	Contaminated Toluene Tank
W.1	19-002	AUX BOILER	Auxiliary boiler, natural gas-fired low-NOx burners
W.2	19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).
Note: After shutdown of the BW-BOILER and E BOILER, rows that reference stack vent IDs 09-001 and 09-002 in Section K shall cease to apply.			

At a minimum, the PMPs shall include:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM,

OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1 6 3 for that unit.

(d) The Permittee shall implement the PMPs, including any required recordkeeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit. IDEM, OAQ may require that the Preventive Maintenance Plans be revised if found to be inadequate to reasonably prevent the exceedance of any limitation on emissions.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as otherwise provided in this condition.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report. Any emergencies that have been previously reported pursuant to paragraph (b)(5) of this condition and certified by a "responsible official" need only reference the date of the original report.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the effective date of this permit,

provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the effective date of this permit unless this permit has been modified to reflect such new requirements.

(b) In addition to the nonapplicability determinations set forth in Sections D – W, of this permit, IDEM, OAQ has also made the determinations regarding this source as listed in Attachment A.

(c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of the effective date of this permit;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T129-30384-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the date(s) of each deviation, the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. This report shall be submitted within thirty (30) days of the end of the reporting period. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The first report shall cover the period commencing on the effective date of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(d) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] Such request or notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, or in other application formats authorized by the Commissioner, and shall include the information specified in 326 IAC 2-7-4. Such

information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b), (c), or (e). The Permittee shall make such records available, upon reasonable request, for public review. Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]

(1) The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(2) Backup fuel switches specifically addressed in, and limited under, Sections D - W of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.21 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2]

(a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

(b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2-2.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any emission limitation, standard, or rule in Title 326 of the Indiana Administrative Code, nothing in such title shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with the emission limitation, standard, or rule, if the appropriate performance or compliance test or procedure had been performed.

B.26 Applicable Requirements

Many provisions in Sections D - W of the permit contain references to a "permit condition" in Attachment A: Sections AA - UU and Attachments C-F, as well as a citation to a federal regulation in Title 40 of the Code of Federal Regulations. In each case, the applicable requirement is the federal regulation that is cited (version in effect as of the effective date of this permit, or as specifically updated in an amendment or renewal of this permit). The "permit conditions" in Attachment A: Sections AA - UU and Attachments C-F are not applicable requirements and are not enforceable; they are solely for informational purposes. The Permittee is not required to certify compliance with any provision in Attachment A: Sections AA - UU and Attachment C-F.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and to which the control methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 [Reserved]

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed in a renovation project is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The

notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(35). The provision to submit a test protocol is not federally enforceable.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(35). This condition is not federally enforceable.

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation

not later than five (5) days prior to the end of the initial forty-five (45) day period. This condition is not federally enforceable.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of the effective date of this permit. If required by any Section D - V, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install all continuous opacity monitoring systems (COMS) and related equipment as required by a term or condition in Sections D-V of this permit. The Permittee shall calibrate, maintain, and operate all such COMS and related equipment as provided in this Condition. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation, except during events when the provisions of Condition C.12(c) and (d) apply.

(b) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.

(c) In the event that a breakdown of a COMS occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more and a backup COM is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the opacity from the emission unit stack.

(1) Opacity readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time; provided, however, that if such 24-hour period ends during the period beginning two (2) hours before sunset and ending two (2) hours after sunrise, then such opacity readings shall begin within four (4) hours of sunrise on the day following the expiration of such 24-hour period.

(2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.

(3) Method 9 readings may be discontinued once a COMS is online.

(4) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

(5) If abnormal opacity is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. An abnormal opacity observation that does not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and/or 40 CFR 63.

C.13 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(b) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5 and 40 CFR 60.48b. The provisions of 326 IAC 3-5 are not federally enforceable.

C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Sections D - V of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.15 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range is no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 14, 2005.

(b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.17 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present in a process at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.18 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Upon detecting an excursion or exceedance from a specified compliance monitoring condition in Sections D-U of this permit, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by

excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by an automated control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records;

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

(f) For purposes of this Condition C.18, the following definitions, which are based upon those in 40 CFR 64, shall be used:

(1) "Exceedance" shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement), consistent with any averaging period specified for averaging the results of the monitoring.

(2) "Excursion" shall mean a departure from an indicator range established for monitoring under Section D through U of this permit, consistent with any averaging period specified for averaging the results of the monitoring.

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment. This requirement does not apply if the Permittee pays the maximum fee set forth in 326 IAC 2-7-19.

Emissions from processes that are insignificant or trivial activities as defined in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40) are not required to be reported in an emission statement.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of the effective date of this permit.

(c) Pursuant to 326 IAC 2-2-8(b), if there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, other than projects at a Clean Unit, which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee)) may result in a significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr)), the Permittee shall comply with the following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated NSR pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

(a) (Reserved)

(b) The reports required by conditions in Sections D - V of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Sections D - V of this permit shall be submitted within thirty (30) days of the end of the reporting period, and require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(e) The first report shall cover the period commencing on the effective date of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record

Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).

(g) The report for a project at an existing emissions unit, required in (f) of this condition, shall be submitted within sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C- General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).

(4) Any other information that the Permittee deems fit to include in this report,

Reports required in (g) of this condition shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.23 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

Boilerhouse II Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) standards, and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected facility or source subject to the applicable regulation.

(a) The affected facilities at Boilerhouse II that are subject to 40 CFR 60, Subpart Db are identified as NE BOILER, BW GAS, and H BOILER. The affected facility is a device which combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium, commences construction, modification, or reconstruction after June 19, 1984, and has a heat input capacity of greater than 100 million Btu per hour.

(b) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER

The Boilerhouse II area includes boilers that are part of existing affected sources subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The “unit designed to burn coal/solid fuel subcategory” includes any boiler or process heater than burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.
The following emissions units constitute the existing affected source for the “unit designed to burn coal/solid fossil fuel subcategory”: BW1-BOILER, BW2-BOILER, and E BOILER. For clarification purposes, E BOILER is located in Boilerhouse I, Section K of this Part 70 permit.

After the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and shutdown of E BOILER, the BW1-BOILER, BW2-BOILER, and E BOILER will no longer be part of the “unit designed to burn coal/solid fossil fuel subcategory.”

(2) The “unit designed to burn gas 1 subcategory” includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.
The following emissions units constitute the existing affected source for the **“unit** designed to burn gas 1 subcategory”: NE BOILER, BW GAS, H BOILER, BW BOILER, R BOILER, H-390, H-109, H-790, H-900, H-900B, and H-520. For clarification

purposes, R BOILER and BW BOILER are located in Boilerhouse I, Section K of this Part 70 permit; H-390, H-109, and H-790 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

(b) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

The Boilerhouse II area includes boilers which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The “unit designed to burn gas 1 subcategory” includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.
The following emissions units constitute the existing affected source for the “unit designed to burn gas 1 subcategory”: NE BOILER, BW GAS, H BOILER, BW1-BOILER, BW2-BOILER, R BOILER, H-390, H-109, H-790, H-900, H-900B, and H-520. For clarification purposes, R BOILER is located in Boilerhouse I, Section K of this Part 70 permit; H-390, H-109, and H-790 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

The following emissions units each constitute a new affected source for the “unit designed to burn gas 1 subcategory”: AUX BOILER, and if the alternative operating scenario in W.1.19 is elected, AUX2 BOILER and CG1 BOILER (in Section W of this Part 70 permit.)

(2) [RESERVED]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1, that apply to the affected facilities NE BOILER, BW GAS, and H BOILER.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	NE BOILER	BW GAS	H BOILER

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	NE BOILER	BW GAS	H BOILER
60.11(a)	Compliance with standards and maintenance requirements	X	X	X
60.11(d)	Compliance with standards and maintenance requirements	X	X	X
60.13(a)	Monitoring requirements	X	X	X
60.13(b)	Monitoring requirements	X	X	X
60.13(c)	Monitoring requirements	X	X	X
60.13(d)	Monitoring requirements	X	X	X
60.13(e)	Monitoring requirements	X	X	X
60.13(f)	Monitoring requirements	X	X	X
60.13(g)	Monitoring requirements	X	X	X
60.13(h)	Monitoring requirements	X	X	X

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER;

D.1.2 General Provisions Relating to NESHAP-"Unit Designed to Burn Coal/Solid Fuel Subcategory" [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the "unit designed to burn coal/solid fuel subcategory" that constitutes an existing affected source, as designated by 40 CFR 63.7490(a)(1), except when otherwise specified in 40 CFR 63, Subpart DDDDD. The Permittee must comply with these requirements no later than January 31, 2016, except as provided in 40 CFR 63.6(i).

(b) Pursuant to IC 13-14-2-6 and in order to secure compliance with 40 CFR Part 63, Subpart DDDDD, the Permittee is subject to the Order of the Commissioner dated January 10, 2014.

(c) Pursuant to the Order, the Permittee shall comply with the standards set forth in 40 CFR 63, Subpart DDDDD for E BOILER (Section K), BW1-BOILER, and BW2-BOILER no later than January 31, 2017.

(d) Condition D.1.2 shall cease to apply after the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and after shutdown of E BOILER is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

D.1.2 [Reserved]

D.1.3 General Provisions Relating to NESHAP- "Unit Designed to Burn Gas 1 Subcategory" [326 IAC 20-1] [IC 13-14-2-6] [40 CFR Part 63, Subpart A]

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the "unit designated to burn gas 1 subcategory" that constitutes the existing affected source subject to 40 CFR 63, Subpart DDDDD, as set forth in 40 CFR 63.7490(a)(1). The Permittee must comply with these requirements by the later of January 31, 2016 or startup, as applicable.

D.1.4 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD] [IC 13-14-2-6]

The existing affected sources, as specified in 40 CFR Part 63, Subpart DDDDD, are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD). Pursuant to 40 CFR Part 63.6(i)(9), the Permittee has made a demonstration sufficient to show that the existing coal-fired boilers (BW1-BOILER, BW2-BOILER, and E BOILER, Section K of this permit) shall have a one-year extension of the January 31, 2016 Subpart DDDDD compliance date, to and including January 31, 2017, for the standards set forth in 40 CFR Part 63, Subpart DDDDD, in accordance with the Order, dated January 10, 2014, from the Commissioner of IDEM.

(1) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER.

The following boilers in Boilerhouse II are part of the existing affected source for the "unit designed to burn coal/solid fossil fuel subcategory": BW1-BOILER and BW2-BOILER (boiler identified as E BOILER is also part of the "unit designed to burn coal/solid fossil fuel subcategory" and is located in Boilerhouse I, Section K of this Part 70 permit). Pursuant to the Commissioner's Order dated January 10, 2014, the compliance date for the existing coal-fired boilers (BW1-BOILER, BW2-BOILER, and E BOILER, Section K of this permit) is January 31, 2017 for the standards set forth in 40 CFR Part 63, Subpart DDDDD. In accordance with the Permittee's extension request demonstration, BW1-BOILER, BW2-BOILER, and E BOILER shall cease to burn coal no later than January 31, 2017.

Condition D.1.4(a)(1) shall cease to apply after the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and after shutdown of BW-BOILER and E BOILER is complete.

(1) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of E BOILER and BW-BOILER [RESERVED]

(2) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER

The table that follows sets forth provisions of 40 CFR 63, Subpart DDDDD standards that apply to the existing affected source for the "unit designed to burn gas 1 subcategory". The following units are part of this subcategory: NE BOILER, BW GAS, and H BOILER; R BOILER, located in Boilerhouse I, Section K of this Part 70 permit; process heaters H-390, H-109, and H-790 in Section N; H-900 and H-900B in Section Q; and H-520 in Section E.

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	BW-BOILER	E BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	H-390	H-109	H-790	H-900	H-900B	H-520
63.7480	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7485	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(a)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(d)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7495(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7495(d)						X	X	X	X	X	X	X	X	X
63.7499(a)	X	X												
63.7499(b)				X										
63.7499(l)			X		X	X	X	X	X	X	X	X	X	X
63.7500(a)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(a)(2)	X	X		X										
63.7500(a)(3)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(e)			X	X	X	X	X	X	X	X	X	X	X	X
63.7500(f)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7501	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7501(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7505(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7510(e)			X		X	X	X	X	X	X	X	X	X	X
63.7510(j)										X				
63.7515(d)			X		X	X	X	X	X	X	X	X	X	X
63.7521					X				X					
63.7521(f-i)					X				X					
63.7530(d-e)			X	X	X	X	X	X	X	X	X	X	X	X
63.7530(f)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7530(g)					X				X					
63.7540(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(2)(i)					X				X					
63.7540(a)(10)(i-v)			X		X	X	X	X	X	X	X	X	X	X
63.7540(a)(10)(vi)(A-C)			X		X	X	X	X	X	X	X	X	X	X
63.7540(a)(11)										X				
63.7540(a)(13)			X		X	X	X	X	X	X	X	X	X	X
63.7540(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(c)(1-4)					X				X					
63.7540(d)			X		X	X	X	X	X	X	X	X	X	X
63.7545(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(b)*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(c)											X			
63.7545(e)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(2 and 4)					X				X					
63.7545(e)(6-7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(8)(i-ii)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(f)(1-5)	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	BW-BOILER	E BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	H-390	H-109	H-790	H-900	H-900B	H-520
63.7550(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(b)(1-4)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(2)					X				X					
63.7550(c)(5)(i-iv)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(5)(xiv and xvii)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(h)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(h)(3)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(a)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(a)(2)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(i and j)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7560(a-c)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7565	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7570(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7570(b)(1-5)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7575	X	X	X	X	X	X	X	X	X	X	X	X	X	X

* Initial notification for indicated emission units was submitted May 16, 2013

(2) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

The table that follows sets forth provisions of 40 CFR 63, Subpart DDDDD that apply to the existing affected source and new affected source(s) for the “unit designed to burn gas 1 subcategory”. The existing affected source is comprised of: BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, H BOILER; H-390, H-109 and H-790 located in Section N of this Part 70 permit; R BOILER in Section K; H-900 and H-900B in Section Q; H-520 in Section E; and, M-475, an existing process heater that is not in the current Part 70 permit. The new affected sources are: AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) located in Section W.

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	H-790	H-900	H-900B	H-520
63.7480	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7485	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(a)(1)	X	X	X	X	X	X				X	X	X	X	X	X
63.7490(a)(2)							X	X	X						
63.7490(b)							X	X	X						
63.7490(d)	X	X		X	X	X				X	X	X	X	X	X
63.7495(a)			X				X	X	X						

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	H-790	H-900	H-900B	H-520
63.7495(b)	X	X	X	X	X	X				X	X	X	X	X	X
63.7495(d)	X	X		X	X	X	X	X	X	X	X	X	X	X	X
63.7499(l)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(a)(1 and 3)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(e and f)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7501	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7505(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7510(e)	X	X	X	X	X	X				X	X	X	X	X	X
63.7510(g)			X				X	X	X						
63.7510(j)											X	X			
63.7515(d)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7521			X							X					
63.7521(f-i)			X							X					
63.7530(d and f)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7530(g)			X							X					
63.7540(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(2)(i)			X							X					
63.7540(a)(10)(i-v)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(10)(vi)(A-C)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(11)			X								X	X			
63.7540(a)(13)	X	X		X	X	X	X	X	X	X	X	X	X	X	X
63.7540(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(c)(1-4)			X							X					
63.7540(d)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(b)**	X	X	X	X	X	X				X	X	X	X	X	X
63.7545(c)			X				X	X	X			X			
63.7545(e)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(2 and 4)			X							X					
63.7545(e)(6-7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(8)(i and ii)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(f)(1-5)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(h)(1-3)	X	X	X												
63.7550(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(b)(1-4)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(2)			X							X					
63.7550(c)(5)(i - iv)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(5)(xiv and xvii)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(h)(1)			X							X					

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	H-790	H-900	H-900B	H-520
63.7550(h)(3)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(a)(1 - 2)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(i and j)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7560(a - c)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7565	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7570(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7570(b)(1 - 5)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7575	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

* AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.
** Initial notification for indicated emission units was submitted May 16, 2013.

(b) Definitions, as set forth in 40 CFR 63.7575, are applicable to the requirements established pursuant to 40 CFR 63, Subpart DDDDD.

Compliance Determination Requirements

D.1.5 Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 40 CFR 60, Subpart Db, compliance determination requirements for boilers NE BOILER, BW GAS, and H BOILER are identified in the following table:

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	NE BOILER	BW GAS	H BOILER
II.3(c)	60.46b(c)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X
II.3(e)(4)	60.46b(e)(4)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6 Record Keeping and Reporting Requirements

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1 that apply to NE BOILER, BW GAS, and H BOILER.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	NE BOILER	BW GAS	H BOILER
60.7(a)	Notification and record keeping	X	X	X
60.7(b)	Notification and record keeping	X	X	X
60.7(c)	Notification and record keeping	X	X	X
60.7(d)	Notification and record keeping	X	X	X
60.7(f)	Notification and record keeping	X	X	X
60.7(g)	Notification and record keeping	X	X	X

(b) All records required to be maintained by Condition D.1.6 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(c) The Permittee shall submit the reports and records required to be submitted by Condition D.1.6 to the address listed in Section C - General Reporting Requirements, of this permit.

D.1.7 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Reporting Requirements [40 CFR 63, Subpart DDDDD][IC 13-14-2-6]

(a) Pursuant to the Commissioner's Order dated January 10, 2014, the Permittee shall submit a status report within fifteen (15) days of completion of the following milestones indicating the actual dates of completion:

(1) The dates on-site construction of the installation of controls, consisting of the COGEN Project and natural gas pipeline extension identified in the technical support document (TSD) of this Part 70 permit, are initiated.

(2) The dates on-site construction of the installation of controls, consisting of the COGEN Project and natural gas pipeline extension, are completed.

(3) The dates by which final compliance with 40 CFR Part 63, Subpart DDDDD for the E BOILER (Section K), BW1-BOILER, and BW2-BOILER are achieved.

(b) The status reports required by Condition D.1.7(a) shall be submitted to:
Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

If submitted after the effective date of this Part 70 permit, the notification requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

D.1.8 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5][IC 13-14-2-6]

Pursuant to the Commissioner's Order, dated January 10, 2014, the Permittee is required to submit to IDEM, OAQ an application within twelve (12) months of the date of the Order for a significant permit modification of this Part 70 permit pursuant to 326 IAC 2-7-12 to add the

compliance schedule requirements of the Order in D.1.7(a). This requirement has been satisfied by the application for permit amendment, SPM 129-34002-00002.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

Natural Gas-fired boilers

(c) The three (3) natural gas-fired boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-101	NE BOILER	NEBRASKA BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1989
01-014	BW GAS	B&W #3 GAS BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1996
01-100	H BOILER	HOLMAN BOILER VENT natural gas fired, low NOx burners and flue gas recirculation	None	None	200 MMBtu/hr	1996

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Prevention of Significant Deterioration (PSD) and PSD Synthetic Minor Limits [326 IAC 2-2-3][326 IAC 2-2]

(a) Pursuant 326 IAC 2-2-3 and PSD (65) 1757, Operating Condition 4, issued on September 17, 1989 and revised through the Title V permit, the boiler identified as NE BOILER is limited to 0.12 pounds of NOx per million Btu of heat input using low NOx burners with staged combustion air and low excess air as Best Available Control Technology (BACT). Compliance with this BACT limit shall be determined on a 30-day rolling average basis, calculated consistent with 40 CFR 60.49b(g)(3).

(b) Pursuant to CP 129-3877-00002 issued on January 5, 1995, Operating Conditions 9 and 10, as amended by A129-8752-00002 issued on October 30, 1997, the Nitrogen Oxides (NOx) emissions from the boiler identified as BW GAS shall be limited to 39 tons per 365

days rolled on a daily basis to ensure that NOx emissions are less than 40 tons per twelve (12) consecutive month period and Prevention of Significant Deterioration (PSD) 326 IAC 2-2 rules are not applicable.

(c) Pursuant to CP 129-4685-00002 issued on October 23, 1995, Operating Conditions 5 and 9 as amended by A129-8752-00002 issued on October 30, 1997, the Nitrogen Oxides (NOx) emissions from the boiler identified as H BOILER shall be limited to 39 tons per 365 days rolled on a daily basis to ensure that NOx emissions are less than 40 tons per twelve (12) consecutive month period and Prevention of Significant Deterioration (PSD) 326 IAC 2-2 rules are not applicable.

D.2.2 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 40 CFR 60.44b(a) and 326 IAC 12, nitrogen oxide (NOx) emissions shall be limited to 0.2 pounds per million Btu of heat input for the boilers identified as NE BOILER, BW GAS and H BOILER. The table that follows provides the specific applicable standards and monitoring provisions that apply to these boilers and the condition number where a description of the provisions can be found in Section II.

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	NE BOILER	BW GAS	H BOILER
II.1(a)	60.44b(a)	Standard for Nitrogen Oxides	X	X	X
II.1(h)	60.44b(h)	Standard for Nitrogen Oxides	X	X	X
II.1(i)	60.44b(i)	Standard for Nitrogen Oxides	X	X	X
II.2(b)	60.48b(b)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(c)	60.48b(c)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(d)	60.48b(d)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(e)	60.48b(e)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(f)	60.48b(f)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(g)	60.48b(g)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X

D.2.3 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-1]

Pursuant to 326 IAC 6-2-1(g) and PC (65)1757, Condition 1, issued on September 17, 1989, and revised through the Title V permit, particulate emissions shall be limited to 0.152 pounds per MMBtu of heat input for the boiler identified as NE BOILER.

D.2.4 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from boilers H BOILER and BW GAS shall each not exceed 0.15 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$ Where Q = total source capacity (MMBtu/hr)

Q = 2051.4 and 2301.4 (MMBtu/hr) for H BOILER and BW GAS, respectively.

Compliance Determination Requirements

D.2.5 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart Db] [326 IAC 2-2]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 40 CFR 60.48b (Emission Monitoring for Particulate Matter and Nitrogen Oxides) and in order to demonstrate compliance with Conditions D.2.1 and D.2.2, a continuous monitoring system, which meets the performance specifications of 326 IAC 3-5-2, shall be calibrated, maintained, and operated for each boiler NE BOILER, BW GAS, and H BOILER for measuring NOx. The continuous emissions monitoring also demonstrates compliance with Condition Q.2.1(c) as specified in Condition Q.2.10(a)(3).

D.2.6 NOx Monitoring System Downtime [326 IAC 2-2] [326 IAC 12] [40 CFR 60, Subpart Db]

In instances of NOx continuous emission monitoring system (CEMS) downtime, the Permittee shall obtain NOx emissions data according to the requirements of 40 CFR 60.48b(f).

D.2.7 Opacity [326 IAC 5-1]

In order to demonstrate compliance with 326 IAC 5-1, NE BOILER, BW GAS, and H BOILER shall only burn natural gas.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.8 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 60, Subpart Db and to document compliance with Condition D.2.1(a) and D.2.2, the Permittee shall keep records and submit reports as specified in the following federal citations as described in Section II.

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	NE BOILER	BW GAS	H BOILER
II.4(d)	60.49b(d)	Reporting and Recordkeeping Requirements	X	X	X
II.4(g)	60.49b(g)	Reporting and Recordkeeping Requirements	X	X	X
II.4(h)	60.49b(h)	Reporting and Recordkeeping Requirements	X	X	X
II.4(i)	60.49b(i)	Reporting and Recordkeeping Requirements	X	X	X
II.4(v)	60.49b(v)	Reporting and Recordkeeping Requirements	X	X	X
II.4(w)	60.49b(w)	Reporting and Recordkeeping Requirements	X	X	X

(b) To document the compliance status with NOx Conditions D.2.1(b) and (c), and D.2.5, the Permittee shall maintain records of all NOx continuous emissions monitoring data, pursuant to 326 IAC 3-5-6.

(c) A quarterly summary of the information to document the compliance status with Condition D.2.1(b) and (c), and D.2.5 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(d) Pursuant to 326 IAC 3-5-7(5) and to comply with D.2.5, reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

(1) Date of downtime.

(2) Time of commencement.

(3) Duration of each downtime.

(4) Reasons for each downtime.

(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by a “responsible official” as defined by 326 IAC 2-7-1(35).

(e) All records required to be maintained by Condition D.2.8 shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

(f) The Permittee shall submit the reports and records required to be submitted by Condition D.2.8 to the address listed in Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two (2) coal-fired and natural gas-fired boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-001	BW1-BOILER	B&W #1 BOILER Coal-fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979
01-001	BW2-BOILER	B&W #2 BOILER Coal-fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.

c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emissions Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two boilers converted from coal-fired to natural gas-fired only that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
01-001	BW1-BOILER	B&W #1 BOILER Natural gas-fired only	None	None	249 MMBtu/hr	1979
01-001	BW2-BOILER	B&W #2 BOILER Natural gas-fired only	None	None	249 MMBtu/hr	1979

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-1]

Pursuant to 326 IAC 6-2-1(g) and PC (65) 2014, Condition (f), issued on January 23, 1978, particulate emissions shall be limited to 0.10 pounds per MMBtu of heat input for each of BW1-BOILER and BW2-BOILER.

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.2 Sulfur Dioxide (SO2) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1-2(a) and the following permit conditions: Condition (e) of PC (65) 2014, issued on January 23, 1978, Condition 5 of 65-01-94-0211, issued on March 23, 1990, and Condition 5 of 65-01-94-0212, issued on March 23, 1990, and as revised through the Title V permit, the SO2 emissions from the two (2) coal-fired boilers, identified as BW1-BOILER and BW2-BOILER shall each not exceed 2.19 pounds per million Btu (lbs/MMBtu).

Condition D.3.2 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.2 [Reserved]

D.3.3 Prevention of Significant Deterioration Minor Limits (PSD) [326 IAC 2-2]

(a) After conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only, the boilers' CO emissions are limited pursuant to Condition W.1.4(b).

(b) After conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only, the boilers' VOC emissions are limited pursuant to Condition W.1.4(c).

Compliance Determination Requirements

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.4 Particulate Control [326 IAC 2-7-6(6)]

In order to demonstrate compliance with 326 IAC 6-2-1 and Condition D.3.1, the emissions from BW1-BOILER and BW2-BOILER shall be directed to the filters used for particulate control whenever the boilers are in operation.

Condition D.3.4 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.4 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.5 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 64]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2-7-5(3)(A)(ii), and 40 CFR 64, a continuous opacity monitoring system that meets the performance specifications of 326 IAC 3-5-2 shall be installed on the common stack for BW1-BOILER and BW2-BOILER and shall be calibrated, maintained, and operated for measuring opacity.

Condition D.3.5 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.5 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.6 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

In order to demonstrate compliance with the SO2 limits pursuant to Condition D.3.2, the Permittee shall demonstrate, using a calendar month average, that the sulfur dioxide emissions do not exceed the equivalent of 2.19 pounds per MMBtu from the two (2) coal-fired and natural gas-fired boilers, identified as BW1-BOILER and BW2-BOILER when combusting coal. The Permittee may demonstrate such compliance by using one of the following methods pursuant to 326 IAC 7-2-1(c) and in accordance with procedures specified in 326 IAC 3-7:

(a) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data for BW1-BOILER and BW2-BOILER shall be collected as follows:
  (1) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or
  (2) Pursuant to 326 IAC 3-7-2(b)(2) and 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval, that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring; or
  (3) The Permittee shall meet the minimum sampling requirements specified in 326 IAC 3-7-2(b)(3), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e).

(b) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Condition D.3.6 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.6 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.7 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM testing for BW1-BOILER and BW2-BOILER utilizing methods as approved by the Commissioner. PM compliance demonstration testing shall be repeated at least once every three (3) years from the date of the previous compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Condition D.3.7 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.7 [Reserved]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.8 COM Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) In the event of a continuous opacity monitor (COM) opacity exceeding twenty percent (20%) average opacity for three (3) consecutive six (6) minute averaging periods, reasonable response steps shall be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty percent (20%). Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) COM opacity readings in excess of twenty percent (20%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) The Permittee may request that the IDEM, OAQ approve a different opacity trigger level than the one specified in D.3.8(a) and (b), provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.

(d) Condition D.3.8 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.8 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.9 Method 9 Opacity Readings

(a) Whenever a COM is malfunctioning, the Permittee shall follow the procedures in accordance with Section C - Maintenance of Continuous Opacity Monitoring Equipment, until such time that the continuous opacity monitor is back in operation.

(b) Whenever a COM is malfunctioning, reasonable response steps shall be taken whenever the opacity from a boiler, measured by Method 9, exceeds twenty percent (20%) for any three (3) consecutive six (6) minute average periods. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) Condition D.3.9 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.9 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.10 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)][40 CFR 64]

(a) The Permittee shall record the pressure drop across each baghouse used in conjunction with BW1-BOILER and BW2-BOILER at least once per day when the boilers are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 12.0 inches of water or a range established based upon stack test data, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site.

(c) Condition D.3.10 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.10 [Reserved]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.11 Record Keeping Requirements

(a) To document the compliance status with the SO2 provisions in Conditions D.3.2 and D.3.6, the Permittee shall maintain records of the information specified in (1) through (5) below. Records maintained for (1) through (5) shall be maintained on a monthly basis and shall be sufficient to establish compliance with the SO2 emission limits established in Condition D.3.2.

(1) Calendar dates covered in the compliance determination period; and
(2) Actual coal usage since last compliance determination period; and
(3) Sulfur content and heat content; and
(4) Sulfur dioxide emission rates; and
(5) Results of analysis of coal, or vendor analysis of coal and coal supplier certification.

(b) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) for BW1-BOILER and BW2-BOILER to be followed for sampling, handling, analysis, quality control, quality assurance, and date reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition any revision to the SOP shall be submitted to IDEM, OAQ.

(c) To document the compliance status with Conditions D.3.5 and D.3.8, the Permittee shall maintain records of the continuous opacity monitoring (COM) data in accordance with 326 IAC 3-5. Records shall be sufficient to establish compliance with the limits established in this section. When the COM system is not functioning, the Permittee shall maintain records of opacity readings of the stack exhaust, in accordance with Section C - Maintenance of Continuous Opacity Monitoring Equipment in order to document compliance with Condition D.3.9.

(d) To document the compliance status with Condition D.3.10, the Permittee shall maintain the daily record of the pressure drop readings across each baghouse required by Condition D.3.10. When a daily reading is not recorded, the Permittee shall maintain records of the reason for the lack of a pressure drop reading (e.g. the process did not operate during that day).

(e) All records required to be maintained by Condition D.3.11 shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements-contains the Permittee's obligations with regard to the record keeping required by this condition.

(f) Condition D.3.11 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only D.3.11 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.12 Reporting Requirements

(a) A quarterly report of opacity exceedances shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A report containing the information specified in 326 IAC 3-5-7 may be used to fulfill this requirement. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(b) A quarterly report of the calendar month average coal sulfur content, coal heat content, and sulfur dioxide emission rate in pounds per million Btus for BW1-BOILER and BW2-BOILER and the total monthly coal consumption shall be submitted, not later than thirty (30) days following the end of each calendar quarter. [326 IAC 7-2-1(c)(2]
The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(c) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:
(1) Date of downtime.
(2) Time of commencement.
(3) Duration of each downtime.

(4) Reasons for each downtime.
(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(d) The Permittee shall submit the reports and records required to be submitted by Condition D.3.12 to the address listed in Section C - General Reporting Requirements, of this permit.

(e) Condition D.3.12 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.12 [Reserved]

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

Ash Handling - BEFORE Coal Ceases to Be Transferred at Boilerhouse II

(e) The ash handling equipment located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-006	BF-ASVB	BAG FILTER FOR ASH HANDLING SYSTEM	None	Bagfilter	11.3 tons/hr	1979

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-005	TRDB	TRIPPER ROOM DUST BLOWER	None	None	30 tons/hr	N/A
01-007	ASVBF	ASH SILO BAG FILTER	Bagfilter*	None	11.3 tons/hr	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.

c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* There are no control requirements required for the bagfilter associated with stack/vent ID 01-007 because uncontrolled emissions/hour are only about 10 percent of the allowable emissions for this emission unit.

Ash Handling - AFTER Coal Ceases to Be Transferred at Boilerhouse II

(e) **[RESERVED]**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from BF-ASVB, TRDB, and ASVBF shall not exceed the emission rate calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour;
and P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for these emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
01-006	BF-ASVB	11.3	20.8
01-005	TRDB	30.0	40.0
01-007	ASVBF	11.3	20.8

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

(c) Condition D.4.1 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF-ASVB, TRDB and AVBF cease operation.

Compliance Determination Requirements

D.4.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with 326 IAC 6-3-2 and Condition D.4.1, the bagfilter associated with the facility BF-ASVB shall be in operation at all times that material is being transferred into the facility.

Condition D.4.2 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF ASVB, TRDB and AVBF cease operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.3 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the stack exhaust from the filter associated with BF-ASVB (01-006) shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhaust from the filter associated with BF-ASVB, the Permittee shall take reasonable response steps An observation of abnormal emissions that does not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(f) Condition D.4.3 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF ASVB, TRDB and AVBF cease operation.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.3, the Permittee shall maintain the weekly record of the visible emission notations required by Condition D.4.3(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(b) All records required to be maintained by Condition D.4.4 shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

(c) Condition D.4.4 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF ASVB, TRDB and AVBF cease operation.

SECTION D.4 AFTER Coal Ceases to Be Transferred at Boilerhouse II

EMISSIONS UNIT OPERATION CONDITIONS [RESERVED]

Section D consists of the following Sections: D.1, D.2, D.3, D.4, two (2) Part 70 Usage Reporting Forms, and two (2) Part 70 Quarterly Reporting Forms.

Condition D.4.4 concludes the Section D requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.2.1(b)
Facility: Vent 01-014; BW GAS
Parameter: NOx
Limit: 39 tons per 365 days rolled on a daily basis and 0.20 lb/MMBtu

Month: _____ **Year:** _____

Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-day Rolling Total (Tons)	Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-day Rolling Total (Tons)
1					17				
2					18				
3					19				
4					20				
5					21				
6					22				
7					23				
8					24				
9					25				
10					26				
11					27				
12					28				
13					29				
14					30				
15					31				
16					no. of deviations				

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.2.1(c)
Facility: Vent 01-100; H BOILER
Parameter: NOx
Limit: 39 tons per 365 days rolled on a daily basis and 0.20 lb/MMBtu

Month: _____ **Year:** _____

Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-day Rolling Total (Tons)	Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-day Rolling Total (Tons)
1					17				
2					18				
3					19				
4					20				
5					21				
6					22				
7					23				
8					24				
9					25				
10					26				
11					27				
12					28				
13					29				
14					30				
15					31				
16					no. of deviations				

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.3.2 **-** This condition will cease to apply after BW1- BOILER permanently ceases burning coal.
Facility: Vent 01-001, BW1-BOILER
Parameter: SO2
Limits: 2.19 lbs SO2 per million Btu heat input

Year: _____ **Quarter:** _____

Month	Sulfur Content (%)	Coal Heat Content (Btu/lb)	Coal usage (ton/month)	SO_2 Emissions (lb/MMBTU)

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

This form will cease to apply after BW1-BOILER permanently ceases burning coal.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.3.2 - This condition will cease to apply after BW2-BOILER permanently ceases burning coal.
Facility: Vent 01-001, BW2-BOILER
Parameter: SO2
Limits: 2.19 lbs SO2 per million Btu heat input

Year: _____ **Quarter:** _____

Month	Sulfur Content (%)	Coal Heat Content (Btu/lb)	Coal usage (ton/month)	SO2 Emissions (lb/MMBTU)

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

This form will cease to apply after BW2-BOILER permanently ceases burning coal.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the entire affected source or affected facility subject to the applicable regulation.

(a) The Phenol Chemical Manufacturing Process Unit (PhCMPU) subject to 40 CFR 63, Subpart F, G, and H is identified by its primary product, which is Phenol. The PhCMPU consists of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture Phenol. A chemical manufacturing process unit consists of more than one unit operation. The PhCMPU includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems.

(b) PhD-285, in which Phenol and Acetone are formed, is an affected facility subject to 40 CFR 60, Subpart RRR. PhD-285 consists of unit operations in which one or more chemicals, or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed, plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(c) PhC-650, the cleavage, Acetone, and Phenol distillation unit and recovery system in the Phenol plant, is an affected facility subject to 40 CFR 60, Subpart NNN. PhC-650 consists of a device or vessel in which distillation operations occur, including all associated internals (such as tray or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(d) The Phenol Chemical Manufacturing Plant, identified as FF_CMP, is subject to 40 CFR 61, Subpart FF because it is a facility engaged in the production of chemicals by chemical, thermal, physical, or biological processes for use as a product, co-product, by-product, or intermediate.

(e) PhVV is an affected facility in the Phenol Process Unit subject to 40 CFR 60, Subpart VV. PhVV consists of components assembled to produce Phenol and includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valve or lines, valves, and flanges or other connectors in VOC service and any other devices or systems required by Subpart VV.

(f) The Phenol area includes a process heater, identified as H-520, which is part of an existing affected source (unit designed to burn gas 1 subcategory) subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to H-520 are specified in Section D.1 of this permit.

(g) The Phenol Area includes a miscellaneous organic chemical manufacturing unit (MCPU) which is part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing unit is identified as PhMON_PCP. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials in 40 CFR 63.2435(b)(1) that are not otherwise exempted from requirements of 40 CFR 63, Subpart FFFF. MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to PhMON_PCP are specified in Section V of this permit.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]

The table that follows sets forth provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source PhCMPU, except as provided in 40 CFR 63.103(a) and Table 3 of 40 CFR 63, Subpart F.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.6(e)	Compliance with standards and maintenance requirements
63.6(f)	Compliance with standards and maintenance requirements
63.8(b)	Monitoring requirements
63.8(c)	Monitoring requirements
63.11(a)	Control device requirements
63.12(c)	State authority and delegations

E.1.2 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to the affected facility PhD-285, PhC-650, and/or PhVV, except as provided pursuant to 40 CFR 63.110(d).

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	PhD-258	PhC-650	PhVV
60.11(a)	Compliance with standards and maintenance requirements	X	X	X
60.11(d)	Compliance with standards and maintenance requirements	X	X	X
60.13(e)	Monitoring requirements	X	X	X

E.1.3 General Provisions Relating to NESHAP [326 IAC 14] [40 CFR 61, Subpart A]

The provisions of 40 CFR 61, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 14, applies to the chemical manufacturing plant FF_CMP except when otherwise specified in 40 CFR 61, Subpart FF.

E.1.4 Hazardous Air Pollutants (HAPs) [326 IAC 20] [40 CFR 63, Subparts F and G]

The table that follows provides the specific applicable emission standards of the National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON) [40 CFR 63, Subparts F and G] that apply to the affected source PhCMPU.

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
AA.1(a)	63.102(a)	General Standards
BB.1(a)	63.112(a)	Emission Standard
BB.1(c)	63.112(c)	Emission Standard
BB.1(e)	63.112(e)	Emission Standard
BB.1(f)	63.112(f)	Emission Standard
BB.4(a)	63.132(a)	Process Wastewater Provisions -- General
BB.4(f)	63.132(f)	Process Wastewater Provisions -- General
BB.5(a)	63.150(a)	Emission Averaging Provisions
BB.5(k)	63.150(k)	Emission Averaging Provisions

E.1.5 National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD apply to the H-520 process heater as specified in Section D.1 of this permit.

E.1.6 National Emissions Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing [40 CFR Part 63, Subpart FFFF]

The requirements of 40 CFR Part 63, Subpart FFFF specified in Section V.1 of this permit apply to the miscellaneous organic chemical manufacturing unit identified as PhMON_PCP.

Compliance Determination Requirements

E.1.7 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]

The table that follows provides performance testing requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source PhCMPU, except as provided in 40 CFR 63.103(a) and Table 3 of 40 CFR 63, Subpart F.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.7(a)(3)	Performance testing requirements
63.7(e)	Performance testing requirements

E.1.8 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows provides performance testing requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to the affected facility PhD-285, PhC-650, and PhVV, except as provided pursuant to 40 CFR 63.110(d).

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	PhD-285	PhC-650	PhVV
60.8(a)	Performance tests	X	X	X
60.8(b)	Performance tests	X	X	X
60.8(c)	Performance tests	X	X	X
60.8(d)	Performance tests	X	X	X
60.8(e)	Performance tests	X	X	X
60.8(f)	Performance tests	X	X	X

E.1.9 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subparts F and G]

Pursuant to 40 CFR 63, Subparts F and G, the HON emission point group determination requirements for the affected source PhCMPU are identified in the following table:

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
AA.4(b)	63.103(b)	General Compliance, Reporting, and Recordkeeping Provisions
AA.5	63.107	Identification Of Process Vents Subject To 40 CFR 63, Subpart F
BB.6(a)	63.115(a)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(b)	63.115(b)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(c)	63.115(c)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
BB.6(d)	63.115(d)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(e)(1)	63.115(e)(1)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(f)	63.115(f)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.7(c)	63.132(c)	Process Wastewater Provisions -- General
BB.8(a)	63.144(a)	Process Wastewater Provisions -- Test Methods and Procedures for Determining Applicability and Group 1/Group 2 Determinations
BB.8(b)	63.144(b)	Process Wastewater Provisions -- Test Methods and Procedures for Determining Applicability and Group 1/Group 2 Determinations
BB.8(c)	63.144(c)	Process Wastewater Provisions -- Test Methods and Procedures for Determining Applicability and Group 1/Group 2 Determinations

E.1.10 Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart NNN]

Pursuant to 40 CFR 60, Subpart NNN, test methods and procedures applicable for affected facility PhC-650 are identified in the following table:

Section HH Permit Condition	Applicable 40 CFR Part 60, Subpart NNN Requirement	Regulatory Citation Title
HH.3(a)	60.664(a)	Test Methods and Procedures
HH.3(b)	60.664(b)	Test Methods and Procedures
HH.3(d)	60.664(e)	Test Methods and Procedures
HH.3(e)	60.664(f)	Test Methods and Procedures
HH.3(f)	60.664(g)	Test Methods and Procedures
HH.3(g)	60.664(h)	Test Methods and Procedures

E.1.11 Methods and Procedures [326 IAC 14] [40 CFR 61, Subpart FF]

Pursuant to 40 CFR 61, Subpart FF the compliance procedures for the chemical manufacturing plant FF_CMP are identified in the following table:

Section FF Permit Condition	Applicable 40 CFR Part 61, Subpart FF Requirement	Regulatory Citation Title
FF.2(a)	61.355(a)	Test Methods, Procedures, and Compliance Provisions
FF.2(b)	61.355(b)	Test Methods, Procedures, and Compliance Provisions
FF.2(c)	61.355(c)	Test Methods, Procedures, and Compliance Provisions

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.1.12 Record Keeping and Reporting Requirements

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source PhCMPU, except as provided in 40 CFR 63.103(a) and Table 3 of 40 CFR 63, Subpart F.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.5	Preconstruction review and notification requirements
63.9(a)	Notification requirements
63.9(b)	Notification requirements
63.10(a)	Recordkeeping and reporting requirements
63.10(d)	Recordkeeping and reporting requirements
63.13(a)	Addresses of State air pollution control agencies and EPA Regional Offices
63.13(b)	Addresses of State air pollution control agencies and EPA Regional Offices

(b) The table that follows provides recordkeeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to the affected facility PhD-285, PhC-650, and/or PhVV, except as provided pursuant to 40 CFR 63.110(d).

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	PhD-285	PhC-650	PhVV
60.7(a)	Notification and record keeping	X	X	X
60.7(b)	Notification and record keeping	X	X	

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	PhD-285	PhC-650	PhVV
60.7(c)	Notification and record keeping			X
60.7(d)	Notification and record keeping	X	X	
60.7(f)	Notification and record keeping	X	X	X
60.7(g)	Notification and record keeping	X	X	X
60.7(h)	Notification and record keeping	X	X	X

(c) The table that follows provides the specific applicable record keeping and reporting standards of the National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON) [40 CFR 63, Subparts F and G] that apply to the affected source PhCMPU.

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
AA.6(b)	63.103(b)	General Compliance, Reporting, and Recordkeeping Provisions
AA.6(c)	63.103(c)	General Compliance, Reporting, and Recordkeeping Provisions
AA.6(d)	63.103(d)	General Compliance, Reporting, and Recordkeeping Provisions
BB.10(e)(2)	63.115(e)(2)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.11(f)	63.117(f)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests
BB.12(f)	63.118(f)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements
BB.13(b)	63.146(b)	Wastewater Provisions: Reporting
BB.14(f)	63.147(f)	Wastewater Provisions: Reporting and Recordkeeping
BB.16(a)	63.151(a)	Initial Notification
BB.17(a)	63.152(a)	General Reporting and Continuous Records
BB.17(b)	63.152(b)	General Reporting and Continuous Records
BB.17(c)	63.152(c)	General Reporting and Continuous Records
BB.17(d)	63.152(d)	General Reporting and Continuous Records
BB.17(e)	63.152(e)	General Reporting and Continuous Records

(d) If a process change is made to the affected source PhCMPU which changes a process vent group status, then the applicable reporting provisions of 40 CFR 63.118(g), (h), (i), (j), and (k) shall apply.

(e) If changes occur to emission points in the affected source, PhCMPU, which affect the Permittee's emission averaging plan, as described in 40 CFR 63.151(i), then the reporting provisions of 63.151(i) shall be followed.

(f) If changes occur to emission points in the affected source, PhCMPU, which are not included in the Permittee's emission averaging plan, as described in 40 CFR 63.151(j), then the reporting provisions of 63.151(j) shall be followed.

(g) If the Permittee requests to monitor an alternative parameter; requests alternatives to the continuous operating parameter monitoring and recordkeeping provisions; or requests additional alternative controls or operating scenarios for the affected source PhCMPU, the applicable reporting provisions of 40 CFR 63.151(f), (g) or (h) shall be followed.

(h) The Permittee shall submit a report according to 40 CFR 61.357(a) for any new source subject to 40 CFR 61, Subpart FF.

(i) If a process change is made to the chemical manufacturing plant, FF_CMP, according to 40 CFR 61.357(b), then the reporting provisions of 61.357(b) shall be followed. If a process change is made to the FF_CMP according to 40 CFR 61.357(c), then the reporting provisions of 61.357(c) shall be followed.

(j) All records required to be maintained by Condition E.1.12 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(k) The Permittee shall submit the reports and records required to be submitted by Condition E.1.12 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Oxidation Process

(h) The Phenol Oxidation Process consists of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-002	E-244	OXIDATE TK VENT CHILLER	None	E-244 is a recovery device	N/A	1979
03-107*	F-235A/B/C/D	CARBON ADSORBERS	Thermal combustion unit (PhTCU)	F-235A/B/C/D is a recovery device	N/A	1979
03-107*	R-670	DETOX	Thermal combustion unit (PhTCU)	None	N/A	1979
N/A	PhDetox WW	PHENOL DETOX WASTEWATER STREAM	None	None	N/A	N/A
N/A	D285	REACTOR PROCESS VENT	None	None	N/A	N/A

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

b. Equipment is integral to the process operation.

c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

* Emissions from the combined oxidizers and oxidate settlers can either be vented directly to the atmosphere, through the carbon adsorbers, or through both the carbon adsorbers and the thermal combustion unit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

(a) Pursuant to PC (65) 1813, Condition 2, issued on December 21, 1989, and revised through the Title V permit, the Phenol Oxidation Process shall be limited as provided below:

(1) Emissions from emission unit E-244 shall not exceed 12.6 tons of VOC per 365-day period, rolled on a daily basis.

(2) Emissions from the combined oxidizers and oxidate settlers shall not exceed 237 tons of VOC per 365-day period, rolled on a daily basis.

Compliance with these limits and Conditions E.3.1, F.4.1, N.2.1, and N.3.1 provide that the net emission increase from the 1989 expansion project (pursuant to PC (65) 1813, issued on December 21, 1989, as amended in this Title V permit) is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

(b) Pursuant to Construction Permit PC (65) 1813, issued on December 21, 1989, Condition 8, as amended by A129-13689-00002, issued on April 26, 2001, and revised through the Title V permit, the nitrogen oxide (NOx) emissions from the thermal combustion unit (PhTCU) shall be limited to less than 40 tons per 365-day period, rolled on a daily basis. Compliance with these limits will ensure that oxides of nitrogen (NOx) emissions are less than 40 tons per year and make 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

E.2.2 Hazardous Air Pollutants (HAPs) [326 IAC 20] [40 CFR 63, Subpart G]

(a) Pursuant to 40 CFR 63.112(e), the Permittee shall comply with the National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON) [40 CFR 63, Subpart G] by meeting the applicable emission standards and monitoring provisions of 40 CFR 63.113 through 40 CFR 63.118 for the Group 1 process vent, R-670, and the Group 2 process vent, E-244. The table that follows provides the specific applicable control and monitoring provisions of the HON that apply to these process vents and the specific condition number where descriptions of these provisions can be found in Section BB.

(1) Pursuant to 40 CFR 63.113(a)(2), the Group 1 process vent, R-670, is controlled by the Thermal Combustion Unit (PhTCU) to meet these provisions.

(2) Pursuant to 40 CFR 63.113(d), the final recovery device on the Group 2 process vent, E-244, maintains the TRE greater than 1.0 to meet these provisions.

(b) Pursuant to 40 CFR 63.112(f), the Permittee shall comply with the HON for the Group 1 wastewater stream, PhDetox WW, and the Group 2 process vent, F-235 A/B/C/D by using an emissions averaging approach such that the emissions do not exceed the emission rate given by the equation in 40 CFR 63.112(a). The table that follows provides the specific applicable provisions of the HON that apply to PhDetox WW and F-235 A/B/C/D, and the Condition number where descriptions of these provisions can be found in Section BB.

(1) Pursuant to 40 CFR 63.150(e), the Group 1 wastewater stream, PhDetox WW, is not being controlled which generates debits.

(2) Pursuant to 40 CFR 63.150(c)(1), the Group 2 process vent, F-235 A/B/C/D, is being controlled by the PhTCU to generate credits. Pursuant to 40 CFR 63.150(m) in the table that follows, F-235 A/B/C/D is required to comply with the testing, monitoring, recordkeeping, and reporting provisions equivalent to the Group 1 process vent, R-670.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Description	R-670	E-244	F-235A/B/C/D	PhDetox WW

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Description	R-670	E-244	F-235A/B/C/D	PhDetox WW
BB.2(a)	63.113(a)	Process Vent Provisions -- Reference Control Technology	X			
BB.2(d)	63.113(d)	Process Vent Provisions -- Reference Control Technology		X		
BB.2(h)	63.113(h)	Process Vent Provisions -- Reference Control Technology	X			
BB.3(a)	63.114(a)	Process Vent Provisions -- Monitoring Requirements	X		X	
BB.3(b)	63.114(b)	Process Vent Provisions -- Monitoring Requirements		X		
BB.3(d)	63.114(d)	Process Vent Provisions -- Monitoring Requirements	X	X	X	
BB.3(e)	63.114(e)	Process Vent Provisions -- Monitoring Requirements	X	X	X	
BB.5(m)	63.150(m)	Emissions Averaging Provisions			X	X

(c) To indicate proper operation of the control or recovery device and pursuant to 40 CFR 63.114(e), the Permittee has established the following range, as determined in the stack test or engineering assessment as allowed pursuant to 40 CFR 63.152(b)(2)(ii), for each parameter monitored under 40 CFR 63.114(a) and (b).

Emission Unit	Control or Recovery Device To Be Monitored	Parameter(s) To Monitor	Parameter Range
R-670	Catalytic Incinerator (PhTCU)	1. Upstream Temperature 2. Temperature Difference Across Catalyst Bed 3. Downstream Temperature	1. ≥ 575°F 2. ≥ 575°F – Upstream Temperature °F 3. ≥ 575°F
E-244	Condenser (E-244)	Condenser Outlet Temperature	≤ 81°F
F-235 A/B/C/D	Carbon Adsorber (F-235 A/B/C/D)	Methanol Concentration	≤ 170 ppm

E.2.3 Alternative Operating Scenario for E-244 to comply with the HON [326 IAC 20] [40 CFR 63, Subpart G]

Instead of complying with the provisions of Condition E.2.2 for E-244, the Permittee may elect to designate the Group 2 process vent E-244 as a HON Group 1 process vent and comply with the alternative operating scenario of this condition. If this alternative is chosen, then pursuant to 40 CFR 63.113(a)(2), the Permittee shall route the E-244 process vent to the PhTCU in order to reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent. The table that follows

provides the specific applicable HON standards and monitoring provisions that apply to this process vent and the condition number where descriptions of the provisions can be found in Section BB.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Title	E-244 Routed to PhTCU
BB.2(a)	63.113(a)	Process Vent Provisions -- Reference Control Technology	X
BB.2(h)	63.113(h)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(a)	63.114(a)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(d)	63.114(d)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(e)	63.114(e)	Process Vent Provisions -- Monitoring Requirements	X

E.2.4 VOC Reduction Agreement

Pursuant to Construction Permit PC (65) 1813, issued on December 21, 1989, Conditions 9, 10, and 11 as amended by A129-13689-00002, issued on April 26, 2001, and revised through the Title V permit:

(a) The Permittee shall reduce VOC emissions from the F-235A/B/C/D carbon beds process vent by 1.0 ton per year using the PhTCU in order to offset each 1.0 ton per year increase in NOx emissions created from using the PhTCU to control F-235A/B/C/D. Only those emissions reductions that are not required to comply with the unit's HON emissions averaging implementation plan shall be available to be used as VOC emission reductions to comply with this requirement. This provision shall not be federally enforceable.

(b) VOC emission reductions used to offset the TCU's NOx emissions shall not be available for contemporaneous emissions netting under state or federal PSD rules or for offsets under the state and federal nonattainment new source review rules.

(c) Beginning April 22, 2010, the requirements in Conditions E.2.4(a) and E.2.6(d) that are applicable to F-235A/B/C/D, shall no longer be applicable if:

(1) The Permittee provides data to IDEM, OAQ showing that the Detox wastewater stream, identified as PhDetox WW, no longer is a HON Group 1 wastewater stream; and

(2) After reviewing the data, IDEM, OAQ agrees, by issuing a permit modification approving the change.

This provision shall not be federally enforceable.

(d) Notwithstanding that compliance with the source's emissions averaging implementation plan under the HON (40 CFR 63, Subpart F and G) may not require the PhTCU to operate full-time, the Permittee shall operate the PhTCU full-time to reduce VOC emissions from the F-235A/B/C/D carbon beds process vent, subject to the startup/shutdown/malfunction provisions of the HON. This provision shall not be federally enforceable.

E.2.5 VOC Emissions from Synthetic Organic Chemical Manufacturing Industry [326 IAC 12] [40 CFR 60, Subpart RRR]

The Permittee shall comply with the requirements of 40 CFR 60, Subpart RRR for the affected facility D285 as provided in (a) or (b) below:

(a) Pursuant to 40 CFR 60.700(c)(5), Subpart RRR, if the Permittee routes the vent stream from the reactor process vent, identified as D285, to the distillation process, identified as C-650, which is a distillation unit subject to 40 CFR 60 Subpart NNN, and the reactor has no other releases to the air except for a pressure relief valve, then D285 is exempt from all the provisions of Subpart RRR except for 40 CFR 60.705(r).

(b) If this alternative is chosen, the Permittee shall comply with the standards, monitoring, testing, reporting, and recordkeeping requirements in 40 CFR 60, Subpart RRR for the affected facility D285.

Compliance Determination Requirements

E.2.6 Volatile Organic Compounds (VOC) and NOx Control

(a) Pursuant to PC (65) 1813, Condition 2, the following emission units shall have the controls or recovery devices listed in the table below.

Emission Unit	Stack/Vent ID	Control or Recovery Equipment
Combined oxidizers and oxidate settlers	03-107	F-235A/B/C/D (Carbon Adsorbers)
E-244 (Oxidate Tank Vent Chiller)	03-002	E-244 is the condenser

(b) In order to comply with the VOC limit described in Condition E.2.1(a)(1), the condenser E-244 shall operate at all times the phenol oxidation process is operating. The VOC emissions for each day shall be determined by the equation below and daily emissions summed for the rolling 365-day period.

$$\text{VOC Emissions} \equiv \left[\frac{1\text{ ton}}{2000\text{ lbs}}\right] \times \left[\left(T_{E244} \times EF_{E244}\right)\right]$$

Where:

T_{E244} = Number of hours the process is vented through E-244 per day; the Permittee may presume this value to be 24 for the purpose of this determination; and

EF_{E244} = Emission factor of 2.54 lbs VOC/hr or the emission factor determined in the most recent performance test.

(c) For purposes of determining compliance with Condition E.2.1(a)(2), the Permittee shall sum the VOC emissions during any 365-day period as follows:

$$\text{VOC Emissions} \equiv \left[\frac{1\text{ ton}}{2000\text{ lbs}}\right] \times \left[\left(T_{PhTCU} \times EF_{PhTCU}\right) + \left(T_{CB} \times EF_{CB}\right) + \left(V_{ATM} \times EF_{ATM}\right)\right]$$

Where:

T_{PhTCU} = Number of hours the spent air was vented through both the carbon adsorbers (F-235A/B/C/D) and the thermal combustion unit (PhTCU) during the 365-day period;

EF_{PhTCU} = Emission factor of 0.66 lb VOC/hr or the emission factor determined in the most recent performance test;

T_{CB} = Number of hours the spent air was vented through the carbon adsorbers (F-235A/B/C/D) but not through the thermal combustion unit (PhTCU) operated during the 365-day period;

EF_{CB} = Emission factor of 15.6 lb VOC/hr or the emission factor determined in the most recent performance test;

V_{ATM} = Total amount of spent air flow in standard cubic feet vented directly to the atmosphere during the 365-day period; and

EF_{ATM} = Emission factor of 0.00056 lb VOC/scf air or the emission factor determined in the most recent performance test.

(d) For purposes of determining compliance with Condition E.2.1(b), the Permittee shall use the following equation to determine the NOx emissions for each day, and then sum the daily emissions for the most recent 365-day period:

$$NO_x\text{ Emissions} \equiv \left[\frac{1\text{ ton}}{2000\text{ lbs}}\right] \times \left[\left(\frac{T_{PhTCU}}{24\text{ hours per day}} \times M_{ammonia} \times EF_{ammonia}\right)\right]$$

Where:

T_{PhTCU} = Number of hours the process is vented through PhTCU each day; the Permittee may presume this value to be 24;

$M_{ammonia}$ = Amount of ammonia, in pounds, added to the Phenol manufacturing oxidation process each day; and

$EF_{ammonia}$ = Emission factor of 0.30 lbs NOx /lb ammonia or the emission factor determined in the most recent performance test.

E.2.7 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition E.2.1(a)(1), the Permittee shall conduct a performance test to verify the emission factor, EF_{E244}, in Condition E.2.6(b), using methods as approved by the Commissioner.

(b) In order to demonstrate compliance with Condition E.2.1(a)(2), the Permittee shall conduct VOC performance testing, using methods as approved by the Commissioner on the following:

(1) The combined oxidizers and oxidate settlers, to determine the emission factor, EF_{ATM}, used during times the spent air is vented directly to the atmosphere. The

resulting emission factor from this test shall be used in the equation specified in Condition E.2.6(c);

(2) The carbon adsorbers, F-235A/B/C/D, to determine the emission factor EF_{CB}. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. The resulting emission factor from this test shall be used in the equation specified in Condition E.2.6(c); and

(3) The thermal combustion unit, to determine the emission factor EF_{PhTCU}. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. The resulting emission factor from this test shall be used in the equation specified in Condition E.2.6(c)

(c) In order to demonstrate compliance with Condition E.2.1(b), the Permittee shall conduct a performance test to verify the NOx emission factor, $EF_{ammonia}$, in Condition E.2.6(d), for the thermal combustion unit using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(d) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

E.2.8 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subpart G]

The HON compliance determination requirements for the Phenol process vent, F-235 A/B/C/D and wastewater stream, PhDetox WW, are identified in the following table.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Description	F-235A/B/C/D	PhDetox WW
BB.9(f)	63.150(f)	Emissions Averaging Provisions	X	X
BB.9(g)	63.150(g)	Emissions Averaging Provisions		X
BB.9(h)	63.150(h)	Emissions Averaging Provisions	X	

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

E.2.9 Monitoring for Carbon Adsorber

In order to demonstrate compliance with E.2.1(a), the Permittee shall monitor the carbon bed adsorbers controlling VOC emissions from the combined oxidizers and oxidate settlers, identified as F-235A/B/C/D. The monitoring pursuant to 40 CFR 63.114(b), Subpart G, as specified in Condition E.2.2 and detailed in Section BB.3(b)(3), satisfies this requirement. When, for any one daily average reading, the monitoring parameters are outside the normal range established pursuant to 40 CFR 63.114(b), the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition E.2.1(a)

of this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

E.2.10 Monitoring for Condensers

In order to demonstrate compliance with E.2.1(a), the Permittee shall monitor the condensers controlling VOC emissions from the emission unit, identified as E-244. The monitoring pursuant to 40 CFR 63.114(b), Subpart G, as specified in Condition E.2.2 and detailed in Section BB.3(b)(2), satisfies this requirement. When, for any one daily average reading, the monitoring parameters are outside the normal range established pursuant to 40 CFR 63.114(b), the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition E.2.1(a) of this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

E.2.11 Flow Meter Operation [326 IAC 2-7-5]

The Permittee shall install, calibrate, maintain and operate flow meter(s) to measure the spent air flow rate continuously during periods of startups, shutdowns and any other instance(s) when the carbon beds are bypassed. In order to demonstrate compliance with Condition E.2.1(a)(2), the Permittee shall submit to IDEM, OAQ a monitoring plan for approval by the Commissioner. The Permittee shall follow the monitoring plan upon submittal to IDEM. If comments are provided by the Commissioner, the Permittee shall revise and submit a new monitoring plan within 30 days of receipt of the comments and the revised plan shall then be implemented by the Permittee.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.2.12 Record Keeping and Reporting Requirements

(a) In order to document the compliance status with Condition E.2.1(a)(1) and E.2.6(b), the Permittee shall maintain daily records of the following:

(1) The number of hours the process is vented through E-244 each day; the Permittee may presume this to be 24 hours per day; and

(2) The amount of VOCs emitted from E-244, calculated pursuant to Condition E.2.6(b).

(b) In order to document the compliance status with Condition E.2.1(a)(2) and E.2.6(c), the Permittee shall maintain daily records of the following:

(1) The amount of time, in hours, the spent air from the combined oxidizers and oxidate settlers is vented to the atmosphere, through the carbon adsorbers, and/or through both the carbon adsorbers and the thermal combustion unit;

(2) The total amount of spent air flow, in standard cubic feet, when the combined oxidizers and oxidate settlers are vented directly to the atmosphere; and

(3) The amount of VOCs emitted from the combined oxidizers and oxidate settlers, calculated pursuant to Condition E.2.6(c), and include the amount of VOCs emitted from each type of venting option.

(c) In order to document the compliance status with Condition E.2.1(b), E.2.4(a) and E.2.6(d) the Permittee shall:

(1) Maintain a record of the number of hours the process is vented through PhTCU each day; the Permittee may presume this to be 24 hours per day;

(2) Monitor and record the rate of ammonia addition to the phenol manufacturing oxidation process at least two (2) times each hour; and

(3) Calculate and maintain records of the VOC emissions reductions generated each day at the F-235A/B/C/D carbon bed process vent based upon the source's calculations of emissions debits and credits pursuant to the source's HON emissions averaging implementation plan, to demonstrate that:

(A) on a calendar year basis, sufficient VOC reductions were generated to offset each ton of the PhTCU's NOx emissions during the year; and

(B) the VOC emissions reductions used to offset the NOx emissions were not needed to comply with the source's HON emissions averaging implementation plan.

This provision shall not be federally enforceable.

(d) A quarterly summary of the information to document the compliance status with Conditions E.2.1(a)(1), E.2.1(a)(2), and E.2.1(b) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) Pursuant to 40 CFR 60.705(r), Subpart RRR and to determine compliance with 40 CFR 60.700(c)(5) as stated in Condition E.2.5, the process design description submitted to IDEM, OAQ on October 2, 1996, must be retained for the life of the process.

(f) Pursuant to 40 CFR 63, Subpart G and to document the compliance status with Conditions E.2.2 and E.2.8, the Permittee shall keep records and submit reports as specified in the federal citations in the table below as described in Section BB. If the Permittee chooses to comply with the alternative operating scenario by rerouting the emission source E-244 to the existing Thermal Combustion Unit (PhTCU) as described in Condition E.2.3, then the provisions that are applicable to emission source R-670 shown below, are also applicable to emission source E-244.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Description	R-670	E-244	F-235A/B/C/D	PhDetox WW
BB.11(a)	63.117(a)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests	X	X	X	
BB.12(a)	63.118(a)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements	X		X	
BB.12(b)	63.118(b)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements		X		
BB.12(c)	63.118(c)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements		X		
BB.12(f)	63.118(f)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements	X	X	X	
BB.15(e)	63.150(e)	Emissions Averaging Provisions				X
BB.15(n)	63.150(n)	Emissions Averaging Provisions			X	X
BB.15(o)	63.150(o)	Emissions Averaging Provisions			X	X
BB.17(f)	63.152(f)	General Reporting and Continuous Records	X	X	X	
BB.17(g)	63.152(g)	General Reporting and Continuous Records	X	X	X	

(g) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it is operating under as detailed in Condition E.2.3. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(h) All records required to be maintained by Condition E.2.12 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(i) The Permittee shall submit the reports and records required to be submitted by Condition E.2.12 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Distillation Process

(i) The Phenol Distillation Process consists of the emission units C-650, E-429 and H-520. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7.

The Phenol plant area includes a MON MACT (40 CFR 63 Subpart FFFF) miscellaneous organic chemical manufacturing unit (MCPU) for the production of PCP. The MCPU is identified as PhMON_PCP. E-492 is a Group 2 Continuous Process Vent in PhMON_PCP. MON MACT requirements applicable to E-492 are contained in permit Section V.

This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-005	C-650	CLEAVAGE, ACETONE & PHENOL DISTILLATION	None	BACT: condensers + scrubber (E-614, E-314, C-650)	N/A	1979
03-006	E-429	AMS TOP COL VENT CHILLER	None	E-429 is a recovery device	N/A	1979
03-007	H-520	NATURAL GAS FIRED HEAVY ENDS COLUMN REBOILER	None	None	7.7 MMBtu/hr	1979
03-109	E-492	PCP VENT CONDENSER	None	E-492 is a recovery device	N/A	2002

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.3.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to PC (65) 1813, Condition 2, issued on December 21, 1989, and revised through the Title V permit, the following emission units shall be limited as provided below:

(a) Emissions from emission unit C-650 (Cleavage, Acetone and Phenol Distillation), Stack/Vent ID 03-005, shall not exceed 75.5 tons of VOC per 365-day period, rolled on a daily basis.

(b) Any change or modification which increases the VOC emissions of emission unit H-520 (Heavy Ends Column Reboiler), Stack/Vent ID 03-007 to greater than 2.5 tons of VOC per twelve (12) consecutive month period must receive prior approval from IDEM, OAQ.

Compliance with this Condition E.3.1 and Conditions E.2.1(a), F.4.1, N.2.1, and N.3.1 ensures that the net emission increase from the 1989 expansion project (pursuant to PC (65) 1813, issued on December 21, 1989, as amended in this Title V permit) is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

E.3.2 Hazardous Air Pollutants (HAPs) [326 IAC 14][326 IAC 20] [40 CFR 63, Subpart F] [40 CFR 63, Subpart G]

(a) Pursuant to 40 CFR 63.112(e), the Permittee shall comply with the HON by meeting the applicable control and monitoring provisions of 40 CFR 63.113 through 40 CFR 63.118 for the Group 2 process vents C-650 and E-429. Pursuant to 40 CFR 63.113(d), the final recovery device on the Group 2 process vents, C-650 and E-429, maintains the TRE greater than 1.0 to meet these provisions. The table that follows provides the specific applicable standards and monitoring provisions of the HON that apply to these process vents and the Condition number where descriptions of the provisions can be found in Section BB. Instead of the provisions listed below, the Permittee may elect the alternative operating scenario for process vents C-650 and E-429 as described in Condition E.3.3.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Title	C-650	E-429
BB.2(d)	63.113(d)	Process Vent Provisions -- Reference Control Technology	X	X
BB.3(b)	63.114(b)	Process Vent Provisions -- Monitoring Requirements	X	X
BB.3(d)	63.114(d)	Process Vent Provisions -- Monitoring Requirements	X	X
BB.3(e)	63.114(e)	Process Vent Provisions -- Monitoring Requirements	X	X

(b) To indicate proper operation of the control or recovery device and pursuant to 40 CFR 63.114(e), the Permittee has established the following range, as determined in the stack test or engineering assessment as allowed pursuant to 40 CFR 63.152(b)(2)(ii), for each parameter monitored under 40 CFR 63.114(a) and (b).

Emission Unit	Control or Recovery Device To Be Monitored	Parameter(s) To Monitor	Parameter Range
C-650	Scrubber (C-650)	1. Temperature of Scrubbing Liquid 2. Specific Gravity of Scrubbing Liquid	1. ≤ 132°F 2. < 1.12 ≥ 0.92
E-429	Condenser (E-429)	Condenser Outlet Temperature	≤ 68°F

E.3.3 Alternative Operating Scenario for C-650 and/or E-429 to comply with HON [326 IAC 20] [40 CFR 63, Subpart G]

Instead of complying with the provisions of Condition E.3.2, the Permittee may elect to designate the Group 2 process vent C-650 and/or E-429 as HON Group 1 process vents and comply with the alternative operating scenario of this condition. If this alternative is chosen, pursuant to 40 CFR 63.113(a)(2), the Permittee shall route the C-650 and/or E-429 process vent to the existing PhTCU in order to reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent. The table that follows provides the specific applicable standards and monitoring provisions of the HON that apply to this process vent and the condition number where a description of the provisions can be found in Section BB.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Title	to PhTCU
BB.2(a)	63.113(a)	Process Vent Provisions -- Reference Control Technology	X
BB.2(h)	63.113(h)	Process Vent Provisions -- Reference Control Technology	X
BB.3(a)	63.114(a)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(d)	63.114(d)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(e)	63.114(e)	Process Vent Provisions -- Monitoring Requirements	X

E.3.4 VOC Emissions from Synthetic Organic Chemical Manufacturing Industry [326 IAC 12] [40 CFR 60, Subpart NNN]

Pursuant to 40 CFR 60.660(c)(4), if the Permittee maintains a total resource effectiveness (TRE) greater than 8.0 for the process vent, identified as emission unit C-650, then C-650 is exempt from all provisions of Subpart NNN except for 40 CFR 60.662; 60.664(e), (f), and (g); and 60.665 (h) and (l). In such case, instead of complying with this provision, the Permittee may elect one of the alternative operating scenarios for process vent C-650 as described in Condition E.3.5.

E.3.5 Alternative Operating Scenario for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry [326 IAC 12] [40 CFR 60, Subpart NNN] [40 CFR 63, Subpart G]

Instead of complying with the provisions of Condition E.3.4 for C-650, the Permittee may elect to comply with one of the alternative operating scenarios described in this condition.

(a) If this alternative is chosen, then pursuant to 40 CFR 60.662(c) [described in HH.1(c)], the Permittee shall maintain a total resource effectiveness (TRE) greater than 1.0 for the process vent, identified as emission unit C-650. Pursuant to 40 CFR 63.110(d)(5)(ii)(C), the Permittee shall comply with the relevant HON continuous monitoring of recovery device operating parameters and the associated testing, reporting and recordkeeping as specified in E.3.2 and E.3.11(d). The Permittee shall also comply with the applicable 40 CFR 60, Subpart NNN recordkeeping and reporting as specified in E.3.11(f).

(b) If this alternative is chosen, then pursuant to 40 CFR 60.662(a) [described in HH.1(a)], the Permittee shall route the C-650 process vent to the PhTCU in order to reduce emissions of Volatile Organic Compounds by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent. Pursuant to 40 CFR 63.110(d)(4), the Permittee shall comply with the HON instead of the provisions of 40 CFR 60, Subpart NNN. Condition E.3.3 lists the applicable HON provisions.

E.3.6 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, the PM emissions from reboiler H-520 are limited to 0.16 pounds per million Btu heat input. This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} \qquad \text{Where } Q = 1795.5 \text{ MMBtu/hr}$$

E.3.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 and PC (65) 1813, issued on December 21, 1989, Condition 1, the Cleavage, Acetone and Phenol distillation processes, identified as emission unit C-650, shall use condensers and a scrubber, which is considered best available control technology (BACT).

Compliance Determination Requirements

E.3.8 Volatile Organic Compounds (VOC) Control

(a) Pursuant to PC (65) 1813, Condition 2, the emission units listed in the table below shall have the controls or recovery devices listed in the table below.

(b) In order to comply with the VOC limits described in Condition E.3.1 and E.3.7, the emission units shall, at all times, use the control or recovery device listed in the table below for VOC emissions.

Emission Unit	Stack/Vent ID	Control or Recovery Equipment
C-650 (Cleavage, Acetone and Phenol Distillation)	03-005	BACT Condensers and Scrubber (E-614, E-314, and C-650)
H-520 (Heavy Ends Column Reboiler)	03-007	Flue Gas Recirculation

(c) For purposes of determining compliance with the VOC limit described in Condition E.3.1(a), the VOC emissions from C-650 emission unit for each day shall be determined by the equation below, and daily emissions summed for the rolling 365-day period.

$$\text{VOC Emissions} \equiv \left[\frac{1\text{ ton}}{2000\text{ lbs}}\right] \times \left[\left(T_{C650} \times EF_{C650}\right)\right]$$

Where:

T_{C650} = Number of hours the process is vented through C-650 per day; the Permittee may presume this value to be 24 for the purpose of this determination; and

EF_{C650} = Emission factor of 6.066 lb VOC/hr or the emission factor determined in the most recent performance test.

If the Permittee elects to route the C-650 process vent to the existing PhTCU, as provided in Condition E.3.3, then operation of the PhTCU in accordance with HON requirements demonstrates compliance with the VOC limit described in Condition E.3.1(a), and the compliance determination using the equation in this condition E.3.8(c), the testing in Condition E.3.9, the monitoring for the C-650 scrubber, and the related recordkeeping and reporting in Condition E.3.11(a) and (c) are not required.

E.3.9 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition E.3.1(a), the Permittee shall conduct a VOC performance test to verify the emission factor in Condition E.3.8(c), using methods as approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

E.3.10 Monitoring for Scrubbers

In order to demonstrate compliance with Condition E.3.1, the Permittee shall monitor the scrubber, C-650, controlling VOC emissions from the cleavage, Acetone and Phenol distillation process, identified also as emission unit C-650. The monitoring pursuant to 40 CFR 63.114(b), Subpart G, as specified in Condition E.3.2 and detailed in Section BB.2(b)(2), satisfies this requirement. When for any one daily average reading, the monitoring parameters are outside the normal range established pursuant to 40 CFR 63.114(b), the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition E.3.1 of this permit. The requirements in this condition do not require monitoring C-650 scrubber when the Permittee operates in accordance with the Alternative Operating Scenario in Condition E.3.3. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.3.11 Record Keeping and Reporting Requirements

(a) In order to document the compliance status with Condition E.3.1(a), the Permittee shall maintain daily records of the following:

(1) The number of hours the process is vented through C-650 each day; the Permittee may presume this to be 24 hours per day; and

(2) The amount of VOCs emitted from C-650, calculated pursuant to Condition E.3.8(c).

(b) In order to document the compliance status with Condition E.3.1(b), the Permittee shall maintain monthly records of the amount of VOC emitted from emission unit H-520.

(c) A quarterly summary of the information to document the compliance status with Condition E.3.1(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(d) Pursuant to 40 CFR 63, Subpart G and to document compliance with Condition E.3.2 or the alternative operating scenario in Condition E.3.3 the Permittee shall keep records and submit reports as specified in the following federal citations as described in Section BB. Pursuant to 40 CFR 63.110(d)(4), the Permittee shall also keep records and submit reports as specified in the following federal citations which are described in Section BB in order to document compliance with the alternative operating scenario as detailed in Condition E.3.5(b).

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Title	C-650	E-429
BB.11(a)	63.117(a)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests	X	X
BB.11(f)	63.117(f)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests	X	X
BB.12(b)	63.118(b)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements	X	X
BB.12(c)	63.118(c)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements	X	X
BB.12(f)	63.118(f)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements	X	X
BB.17(f)	63.152(f)	General Reporting and Continuous Records	X	X
BB.17(g)	63.152(g)	General Reporting and Continuous Records	X	X

(e) Pursuant to 40 CFR 60, Subpart NNN and in order to document compliance with Condition E.3.4, the Permittee shall keep records and submit reports as specified in the following federal citations which are described in Section HH.

Section HH Permit Condition	Applicable 40 CFR Part 60, Subpart NNN Requirement	Regulatory Citation Title	C-650
HH.4(g)	60.665(h)	Reporting and Recordkeeping Requirements	X
HH.4(i)	60.665(l)	Reporting and Recordkeeping Requirements	X

(f) Pursuant to 40 CFR 63.110(d)(5)(C)(ii) and to document the compliance status with 40 CFR 60.662(c), as stated in the alternative operating scenario in Condition E.3.5(a), the Permittee shall keep records and submit reports as described in the table of Condition E.3.11(d) and in the following federal citations which are described in Section HH.

Section HH Permit Condition	Applicable 40 CFR Part 60 Requirement	Regulatory Citation Title	C-650
HH.4(a)	60.665(a)	Reporting and Recordkeeping Requirements	X
HH.4(b)	60.665(b)	Reporting and Recordkeeping Requirements	X
HH.4(g)	60.665(h)	Reporting and Recordkeeping Requirements	X
HH.4(h)	60.665(l)	Reporting and Recordkeeping Requirements	X

(g) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of which scenarios it operates under as detailed in Conditions E.3.3 and E.3.5. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(h) All records required to be maintained by Condition E.3.11 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(i) The Permittee shall submit the reports and records required to be submitted by Condition E.3.11 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION E.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Hazardous Waste Boilers

(j) The boilers located in the Phenol Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-008	H-530A*	LIQUID WASTE RESIDUE/GAS FIRED BOILER	None	None	75 mmBtu/hr	1979
03-008	H-530B*	LIQUID WASTE RESIDUE/GAS FIRED BOILER	None	None	75 mmBtu/hr	1982

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

*H-530A and H-530B are each an affected source subject to 40 CFR 63, Subpart EEE and are defined as hazardous waste liquid fuel boilers pursuant to 40 CFR 63.1201. Applicable Subpart EEE requirements are set forth in Section E.10.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

BEFORE Shutdown of E BOILER in Boilerhouse I

E.4.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Pursuant to PC (65) 1517, Condition 1, issued on May 3, 1982, the emissions of sulfur dioxide from the H-530B boiler shall be limited to 0.37 pounds per mmBtu and 120 tons per year.

(b) Pursuant to PC (65) 1517, Condition 2, issued on May 3, 1982, the emissions of nitrogen oxides from the H-530B boiler shall be limited to 0.40 pounds per mmBtu and 140 tons per year.

Compliance with these limits and the 325,000 pounds per hour total steam production limit for the E BOILER pursuant to CP 129-5500, Condition 13 issued on September 30, 1996 as stated in Condition K.2.1(b) limits the net increase in sulfur dioxide emissions and nitrogen oxide emissions to below 40 tons per year and renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

Condition E.4.1 shall cease to apply after the shutdown of E BOILER in Boilerhouse I is complete.

AFTER Shutdown of E BOILER in Boilerhouse I

E.4.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Pursuant to PC (65) 1517, Condition 1, issued on May 3, 1982, the emissions of sulfur dioxide from the H-530B boiler shall be limited to 0.37 pounds per mmBtu and 120 tons per year.

(b) Pursuant to PC (65) 1517, Condition 2, issued on May 3, 1982, the emissions of nitrogen oxides from the H-530B boiler shall be limited to 0.40 pounds per mmBtu and 140 tons per year.

E.4.2 Particulate Matter (Sources of Indirect Heating) [326 IAC 6-2-3(a)]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating) the PM emissions from boilers H-530A and H-530B shall be limited to 0.22 and 0.19 pounds per MMBtu heat input, respectively.

This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where

C = 50 ug/m3

Pt = emission rate limit (lbs/MMBtu)

Q = 1422.6 MMBtu/hr for H-530A and 1497.6 MMBtu/hr for H-530B

N = 8 stacks

a = plume rise factor (0.8)

h = 163 ft for H-530A and 148 ft for H-530B

E.4.3 [Reserved]

E.4.4 [Reserved]

Compliance Determination Requirements

E.4.5 Sulfur Dioxide Emissions and Sulfur Content

In order to demonstrate compliance with the SO2 limits pursuant to Condition E.4.1(a), the Permittee shall utilize one of the following options:

(a) Analyze the waste sample to determine the sulfur content of the waste via the procedures in 326 IAC 3-7-4 and as approved by IDEM, OAQ.

(1) Waste samples may be collected from the fuel tank immediately after the fuel tank is filled and before any waste is combusted; or

(2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(3) If waste is being continuously or intermittently added to the fuel tank while waste from the tank is being combusted, one or more samples shall be collected and analyzed at least once per week that represents material being combusted from the tank.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the seventy-five (75) MMBtu per hour boiler, H-530B, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

E.4.6 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with the NOx limits pursuant to Condition E.4.1(b), the Permittee shall conduct a performance test on boiler H-530B to verify the NOx emission rates, in lb/mmBtu, using methods approved by the Commissioner.

(b) In order to demonstrate compliance with Condition E.4.2, the Permittee shall conduct performance tests on boilers H-530A and H-530B using methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

E.4.7 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of H-530A and H-530B stack exhausts shall be performed once per day during normal daylight operations when these boilers burn a mixture of hazardous waste and natural gas. A trained employee shall record whether emissions are normal or abnormal. Inability to conduct a visible emission notation because neither H-530A nor H-530B operated during normal daylight hours shall not be a deviation.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhaust from H-530A and H-530B, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.4.8 Record Keeping and Reporting Requirements

(a) The natural gas boiler certification shall be used for H-530A and H-530B during periods when these boilers burn natural gas only and the Permittee elects not to conduct visible emission (VE) notations. The natural gas certification shall cover the six (6) month periods ending June 30 and December 31. This certificate provides documentation of each time interval when VE notations are not necessary for H-530A and H-530B. For such periods, the natural gas boiler certification shall be submitted using the reporting forms located at the end of this permit, or its equivalent, not later than thirty (30) days following the end of each calendar quarter. The natural gas-fired boiler certification does require the certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(b) To document the compliance status with Condition E.4.1(a) and E.4.5, when burning liquid waste residue, the Permittee shall keep a record of the results of the waste analysis or stack test described in Condition E.4.5.

(c) To document the compliance status with Condition E.4.7, the Permittee shall maintain the daily record of the visible emission notations required by Condition E.4.7(a). When a daily record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours, the unit did not operate during the week or the process did not burn hazardous waste that day).

(d) All records required to be maintained by Condition E.4.8 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

E.4.9 [Reserved]

E.4.10 [Reserved]

SECTION E.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Area Tanks

(k) Tanks located in the Phenol Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	ntegral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-009	V-635	PHENOLIC WATER IMPOUNDMENT TANK/AMS SURGE TANK	None	None	802 m^3	1979
03-010	V-630	DEPHENOLATION FEED TANK	None	None	90 m^3	1979
03-011	D-620	SLOP OIL DRUM	None	None	12.8 m^3	1978
03-013	V-520	OFFSITE AMS STORAGE TANK	None	None	69.7 m^3	1979
03-018	V-704C	CUMENE STORAGE TANK	None	None	10,705 m^3	1978
03-019	V-525A	WASTE HYDROCARBON STORAGE TANK	Condenser or flameless thermal oxidizer	None	558 m^3	1979
03-020	V-704A	CUMENE STORAGE TANK	None	None	10,478 m^3	1978
03-021	V-704B	CUMENE STORAGE TANK	None	None	10,478 m^3	1978
03-024	V-701A	PHENOL STORAGE TANK	None	None	1,873 m^3	1978
03-025	V-701B	PHENOL STORAGE TANK	None	None	1,873 m^3	1978
03-031	V-525B	WASTE HYDROCARBON STORAGE TANK	Condenser or flameless thermal oxidizer	None	558 m^3	1982
N/A	V-310B	Splitter Feed Tank	None	None	1,982 m^3	1988
N/A	V-415B	Crude AMS Tank	None	None	601 m^3	1988
N/A	V-701C	PHENOL STORAGE TANK	None	None	1,929 m^3	1988
03-110	V-455	PROCESS REWORK TANK	None	None	27 m^3	2001

Note: The condenser or flameless thermal oxidizer is operated pursuant to RCRA requirements and has no applicable limits or operating requirements under this Part 70 operating permit.

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-027	V-528	SEAL FLUSH TANK	None	None	less than 8 m^3	1988
03-030	V-720	WASTEWATER STORAGE TANK	None	None	3,875 m^3	1990
03-112	V-760	PCP STORAGE TANK	None	None	280 m^3	2001

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.5.1 Record Keeping and Reporting Requirements

(a) Pursuant to 326 IAC 12, the Permittee shall maintain records of the dimensions and an analysis showing the capacity of storage tank V-701C. These records shall be maintained for the life of the source.

(b) Pursuant to the definition in 40 CFR 63.111, the Phenol CMPU storage vessels identified as V-701A, V-701B, V-704A, V-704B, V-704C and V-701C are Group 2 storage vessels, therefore, pursuant to 40 CFR 63.119(a) and 63.123(a), the Permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 2 status and is in operation.

(c) All records required to be maintained by Condition E.5.1 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(d) The Permittee shall submit the reports required to be submitted by Condition E.5.1 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION E.6 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Heat Exchange System and Transfer Operations

(l) The Phenol heat exchange system located within the PhCMPU is described as the entire recirculating cooling system which is connected to the cooling towers listed as emission units below and identified as PNL CTC1, PNL CTC2, PNL CTC3, PNL CTC 4, and PNL CTC5.

(m) The Phenol transfer operations located within the PhCMPU are identified as emission units PNL TRUCK and PRC below. The transfer operation located within PhMON_PCP is identified as emission unit SP-402.

(n) The barge loading operation, identified as BARGE, is associated with the phenol plant. The BARGE operation conducts bulk loading of acetone onto marine tank barges, which activity is a marine tank vessel loading operation under 40 CFR 63 Subpart Y. The acetone contains organic HAP only as an “impurity”, as defined in 40 CFR 63.561. BARGE is a “source with emissions less than 10 and 25 tons”, as defined in 40 CFR 63.561.

Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]
03-032	PNL TRUCK	PHENOL TRUCK LOADING	Scrubber	None
03-033	PRC	PHENOL RAIL CAR LOADING	None	None
03-100	PNL CTC1	PHENOL COOLING TOWER CELL 1	None	None
03-101	PNL CTC2	PHENOL COOLING TOWER CELL 2	None	None
03-102	PNL CTC3	PHENOL COOLING TOWER CELL 3	None	None
03-103	PNL CTC4	PHENOL COOLING TOWER CELL 4	None	None
03-104	PNL CTC5	PHENOL COOLING TOWER CELL 5	None	None
N/A	BARGE	ACETONE BARGE LOADING	None	None
03-111	SP-402	PCP RAIL CAR	None	None

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.6.1 Hazardous Air Pollutants (HAPs) - Heat Exchange System [326 IAC 20] [40 CFR 63, Subpart F]

Pursuant to 40 CFR 63.104(b), the Permittee shall comply with the applicable emission standards and monitoring provisions of 40 CFR 63.104(a) for the Phenol Chemical Manufacturing Process Unit (PhCMPU) heat exchange system by monitoring the Phenol cooling tower system, identified as PNL CTC1, PNL CTC2, PNL CTC3, PNL CTC4, and PNL CTC5, for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. The table that follows provides the specific applicable monitoring provisions of the HON that apply to this heat exchange system and the specific condition number where descriptions of these provisions can be found in Section AA.

Section AA Permit Condition	Applicable 40 CFR Part 63, Subpart F Requirement	Regulatory Citation Title
AA.2(a)	63.104(a)	Heat Exchange System Requirements
AA.2(b)	63.104(b)	Heat Exchange System Requirements
AA.2(d)	63.104(d)	Heat Exchange System Requirements
AA.2(e)	63.104(e)	Heat Exchange System Requirements

E.6.2 Alternative Operating Scenario for the Phenol Heat Exchange System [326 IAC 20] [40 CFR 63, Subpart F]

Instead of complying with the provisions of Condition E.6.1, the Permittee may elect that the Phenol heat exchange system comply with the alternative operating scenario of this condition. If this alternative is chosen, the Permittee, pursuant to 40 CFR 63.104(c), shall monitor the Phenol heat exchange system for leaks using surrogate indicators for the Phenol cooling tower system, identified as PNL CTC1, PNL CTC2, PNL CTC3, PNL CTC4, and PNL CTC5. The table that follows provides the specific applicable monitoring provisions of the HON that apply to this heat exchange system and the specific condition number where descriptions of these provisions can be found in Section AA.

Section AA Permit Condition	Applicable 40 CFR Part 63, Subpart F Requirement	Regulatory Citation Title
AA.2(a)	63.104(a)	Heat Exchange System Requirements
AA.2(c)	63.104(c)	Heat Exchange System Requirements
AA.2(d)	63.104(d)	Heat Exchange System Requirements
AA.2(e)	63.104(e)	Heat Exchange System Requirements

E.6.3 Hazardous Air Pollutants (HAPs) [40 CFR 63, Subpart Y]

Pursuant to 40 CFR 63.560(a)(4) and 40 CFR 63.560(e)(1)(iv), the barge loading operation, identified as BARGE, associated with the phenol plant shall comply with the submerged fill standards of 46 CFR 153.282 by April 23, 2012

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.6.3 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 63, Subpart F and to document the compliance status with Condition E.6.1 or E.6.2, the Permittee shall keep records and submit reports as specified in 40 CFR 63.104(f) [as described in AA.7(f)]. In addition, if the Permittee chooses to comply with the alternative operating scenario in Condition E.6.2 instead of Condition E.6.1, then the Permittee shall also keep records according to 40 CFR 63.104(c) [as described in AA.2(c)].

(b) Pursuant to 40 CFR 63.111, the PhCMPU transfer racks identified as PNL TRUCK and PRC are Group 2 transfer racks, therefore, pursuant to 40 CFR 63.126(c) and 63.130(f), the Permittee shall record and update annually an analysis demonstrating the design and actual annual throughput of the transfer rack and the weight-percent organic HAPs in the liquid loaded. Examples of acceptable documentation for the weight-percent organic HAPs in the liquid loaded include, but are not limited to, analyses representative of the material and engineering calculations.

(c) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it operates under as detailed in Condition E.6.2. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(d) Pursuant to 40 CFR 63.560(a)(3), the Permittee shall retain records of actual throughputs by commodity, as required by 40 CFR 63.567(j)(4).

(e) The Permittee shall retain records sufficient to establish that the HAP in the acetone being loaded into barges is present only as an impurity, as defined in 40 CFR 63.561. Such records will demonstrate that the exemption at 40 CFR 63.560(d)(5) applies, which causes the requirement at 40 CFR 63.565(l) to calculate an annual estimate of HAP emissions to be not applicable.

(f) All records required to be maintained by Condition E.6.4 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(g) The Permittee shall submit the reports and records required to be submitted by Condition E.6.3 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION E.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Waste

(o) The Phenol area waste is identified as:

(1) A process wastewater stream discarded from the PhCMPU identified as Dephenate Stream which contains a total annual average concentration of organic HAP's listed in table 9 of 40 CFR 63, Subpart G less than 1,000 parts per million by weight; and

(2) HON Maintenance Wastewater, discarded from the PhCMPU that contains organic HAP's listed in table 9 of 40 CFR 63, Subpart G; and

(3) The Benzene containing waste subject to the Benzene Waste Operations NESHAP, 40 CFR 61, Subpart FF, discarded from the Phenol Chemical Manufacturing Plant. FF_CMP identifies the benzene-containing hazardous waste stream(s) generated by the production of chemicals by chemical, thermal, physical, or biological processes for use as a product, co-product, by-product, or intermediate and is either treated, stored, or disposed of.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.7.1 Hazardous Air Pollutants (HAPs) - Maintenance Wastewater [326 IAC 20]
[40 CFR 63, Subpart F and G]

Pursuant to 40 CFR 63.105(d) which is described in Condition AA.21(d), the Permittee shall implement the maintenance wastewater procedures described in 40 CFR 63.105(b) and (c) for all maintenance wastewater that contains those organic HAP's listed in table 9 of 40 CFR 63, Subpart G as part of the start-up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3).

E.7.2 Hazardous Air Pollutants (HAPs) - Benzene Containing Waste [326 IAC 14]
[40 CFR 61, Subpart FF]

Pursuant to 40 CFR Part 61.342(a), Subpart FF the Permittee shall maintain the total annual benzene quantity from the benzene-containing waste, FF_CMP, to less than 11 tons per year and comply with the following federal citations which are described in Section FF.

Section FF Permit Condition	Applicable 40 CFR Part 61, Subpart FF Requirement	Regulatory Citation Title
FF.1(a)	61.342(a)	Standards: General
FF.1(b)	61.342(g)	Standards: General

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.7.3 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 63.132(c), the PhCMPU process wastewater stream identified as Dephenate Stream is Group 2, therefore, pursuant to 40 CFR 63.132(a)(3), the Permittee shall comply with the applicable recordkeeping requirements specified in 40 CFR 63.146(b)(1) and 63.147(b)(8) for this process wastewater stream. The Permittee shall also maintain documentation pursuant to 63.147(f).

(b) Pursuant to 40 CFR 63.105(a) and to document compliance with Condition E.7.1, the Permittee shall keep records for the maintenance wastewater as specified in the following federal citations and described in Section AA.

Section AA Permit Condition	Applicable 40 CFR Part 63, Subpart F Requirement	Regulatory Citation Title
AA.8(b)	63.105(b)	Maintenance Wastewater Requirements
AA.8(c)	63.105(c)	Maintenance Wastewater Requirements
AA.8(e)	63.105(e)	Maintenance Wastewater Requirements

(c) Pursuant to 40 CFR 61.356(a), and to document compliance with 40 CFR 61.342(a) as stated in Condition E.7.2, the Permittee shall keep records as detailed in 40 CFR 61.356(b) [as described in FF.3] in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified. The Permittee shall also submit reports as specified in 40 CFR 61.357(c) [described in FF.4(b)].

(d) All records required to be maintained by Condition E.7.3 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(e) The Permittee shall submit the reports and records required to be submitted by Condition E.7.3 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION E.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Phenol Leak Detection and Repair (LDAR) Components

(p) The Phenol chemical manufacturing process unit (CMPU) consists of equipment subject to LDAR. LDAR applies to Phenol CMPU components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems intended to operate in organic hazardous air pollutant service for 300 hours or more during the calendar year and/or volatile organic compound (HAP/VOC) service for any amount of time during the calendar year. In HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight HAP. In VOC service means that a piece of equipment either contains or contacts a fluid that is at least 10 percent VOC by weight.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.8.1 Equipment Leaks [326 IAC 12] [40 CFR 60, Subpart VV] [326 IAC 20] [40 CFR 63, Subpart H]

(a) Pursuant to 40 CFR 60, Subpart VV, the Permittee shall control leaks of VOC from the Phenol plant equipment. Pursuant to 40 CFR 63.160(c), the Permittee has elected to apply 40 CFR 63, Subpart H to all Phenol plant equipment subject to Subpart VV. All VOC's in the phenol operations shall be considered, for purposes of applicability and compliance with 40 CFR 63, Subpart H, as if it were organic hazardous air pollutant. Compliance with the provisions of Subpart H listed in Condition E.8.1(b) as detailed in Section CC, shall constitute compliance with 40 CFR part 60, Subpart VV. The Permittee may elect to comply with the alternative operating scenario in E.8.2 for equipment subject to Subpart VV and not Subpart H instead of complying with Subpart H.

(b) Pursuant to 40 CFR 63, Subpart H, the Permittee shall control leaks of HAPs from each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by Subpart H according to the following listed Subpart H requirements which are described in Section CC. Any equipment, as defined in Subpart H, that is intended to operate in organic hazardous air pollutant service for less than 300 hours during the calendar year, or is excluded pursuant to 63.160(e) or (f), is exempt from the provisions of 40 CFR 63 Subpart H.

Section CC Permit Condition	Applicable 40 CFR Part 63, Subpart H Requirement	Regulatory Citation Title
CC.1	63.162	Standards: General
CC.2	63.163	Standards: Pumps In Light Liquid Service
CC.3	63.164	Standards: Compressors

Section CC Permit Condition	Applicable 40 CFR Part 63, Subpart H Requirement	Regulatory Citation Title
CC.4	63.165	Standards: Pressure Relief Devices In Gas/Vapor Service
CC.5	63.166	Standards: Sampling Connection Systems
CC.6	63.167	Standards: Open-Ended Valves or Lines
CC.7	63.168	Standards: Valves In Gas/Vapor Service and In Light Liquid Service
CC.8	63.169	Standards: Pumps, Valves, Connectors, and Agitators In Heavy Liquid Service; Instrumentation Systems,; and Pressure Relief Devices In Liquid Service
CC.9	63.170	Standards: Surge Control Vessels and Bottoms Receivers
CC.10	63.171	Standards: Delay of Repair
CC.11	63.172	Standards: Closed-Vent Systems and Control Devices
CC.12	63.173	Standards: Agitators In Gas/Vapor Service and In Light Liquid Service
CC.13	63.174	Standards: Connectors In Gas/Vapor Service and In Light Liquid Service
CC.14	63.176	Quality Improvement Program For Pumps
CC.15	63.179	Alternative Means of Emission Limitation: Enclosed-Vented Process Units
CC.16	63.180	Test Methods and Procedures

E.8.2 Alternative Operating Scenario for Equipment Leaks [326 IAC 12] [40 CFR 60, Subpart VV]

Instead of complying with the provisions of Condition E.8.1(a), the Permittee may elect that the Phenol plant equipment, that are not subject to subpart H, comply with the alternative operating scenario of this condition. If this alternative is chosen, the Permittee, shall comply with Subpart VV. Pursuant to 40 CFR 60.482-1, Subpart VV, the Permittee shall control leaks of VOCs from each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service; and any devices or systems required by Subpart VV according to the following listed in Subpart VV requirements which are described in Section GG.

Section GG Permit Condition	Applicable 40 CFR Part 60, Subpart VV Requirement	Regulatory Citation Title
GG.1	60.482-2	Standards: Pumps in Light Liquid Service
GG.2	60.482-3	Standards: Compressors
GG.3	60.482-4	Standards: Pressure Relief Devices in Gas/Vapor Service
GG.4	60.482-5	Standards: Sampling Connection Systems
GG.5	60.482-6	Standards: Open-Ended Valves or Lines

Section GG Permit Condition	Applicable 40 CFR Part 60, Subpart VV Requirement	Regulatory Citation Title
GG.6	60.482-7	Standards: Valves in Gas/Vapor Service and in Light Liquid Service
GG.7	60.482-8	Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors
GG.8	60.482-10	Standards: Closed Vent Systems and Control Devices
GG.9	60.482-9	Standards: Delay of Repair
GG.10	60.482-1	Monitoring Requirements
GG.11	60.483-1	Alternative standards for valves-allowable percentage of valves leaking.
GG.12	60.483-2	Alternative standards for valves-skip period leak detection and repair.
GG.13	60.485	Test Methods and Procedures

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.8.3 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 63.181, Subpart H and to document compliance with Condition E.8.1, the Permittee shall keep records and submit reports as specified in the following Subpart H applicable requirements which are described in Section CC.

Section CC Permit Condition	Applicable 40 CFR Part 63, Subpart H Requirement	Regulatory Citation Title
CC.15	63.181	Recordkeeping Requirements
CC.16	63.182	Reporting Requirements

(b) If the Permittee elects the alternative operating scenario pursuant to 40 CFR 60.480, Subpart VV as stated in Condition E.8.2, the Permittee shall keep records and submit reports as specified in following Subpart VV applicable requirements which are described in Section GG.

Section GG Permit Condition	Applicable 40 CFR Part 60, Subpart VV Requirement	Regulatory Citation Title
GG.14	60.486	Recordkeeping Requirements
GG.15	60.487	Reporting Requirements

(c) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it operates under as detailed in Condition E.8.2. A summary of these records shall be included with the annual

compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(d) All records required to be maintained by Condition E.8.3 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(e) The Permittee shall submit the reports and records required to be submitted by Condition E.8.3 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION E.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42

Certain liquid streams in open systems

(q) The Phenol chemical manufacturing process units (PhCMPU) includes certain liquid streams subject to open system control requirements. These control requirements apply to the PhCMPU components described as:

(1) A drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flowrate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute; and/or

(2) A tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.9.1 Hazardous Air Pollutants (HAPs) [326 IAC 14][326 IAC 20] [40 CFR 63, Subpart F] [40 CFR 63, Subpart G]

(a) Pursuant to 40 CFR 63.149(a), the Permittee shall comply with the control requirements according to 40 CFR 63, Subpart G, Table 35 for any drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flowrate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute, and the drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator is controlled less stringently than in table 35 and is not listed in 40 CFR 63.100(f), and the item of equipment is not otherwise exempt from controls by the provisions of 40 CFR 63, subparts A, F, G, or H.

(b) Pursuant to 40 CFR 63.149(a), the Permittee shall comply with the control requirements according to 40 CFR 63, Subpart G, Table 35 for any tank with a capacity of 38 m3 or greater that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute, and the tank is controlled less stringently than in table 35 and is not listed in 40

CFR 63.100(f), and the tank is not otherwise exempt from controls by the provisions of 40 CFR 63, subparts A, F, G, or H.

Compliance Determination Requirements

E.9.2 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subpart G]

Pursuant to 40 CFR 63.149(e)(2), the total annual average concentration and annual average flowrate for liquid streams associated with a tank shall be determined at the inlet to the tank and according to the procedures in 40 CFR 63.144(b) and (c).

SECTION E.10 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Hazardous Waste Combustors MACT

Hazardous Waste Combustors MACT Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source subject to the applicable regulation.

(a) H-530A and H-530B are each a hazardous waste liquid fuel boiler; each boiler also burns natural gas as fuel. Each of the boilers is an affected source subject to the Hazardous Waste Combustor MACT (40 CFR 63, Subpart EEE). Each of the boilers is an "area source". The boilers burn natural gas and liquid hazardous waste with an as-fired heating value of 10,000 Btu per pound or greater. Neither of the boilers requires or uses air pollution control systems to achieve compliance with Subpart EEE. H-530A and H-530B combustion gases vent through a common stack (03-008) and do not require, or have, emergency safety vents.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

E.10.1 General Provisions Relating to NESHAP [40 CFR Part 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected sources, H-530A and H-530B, except as otherwise specified in 40 CFR 63, Subpart EEE.

E.10.2 National Emissions Standards for Hazardous Air Pollutants from Hazardous Waste Combustors [40 CFR Part 63, Subpart EEE]

(a) Each of the hazardous waste liquid fuel boilers H-530A and H-530B is an affected source subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) from Hazardous Waste Combustors (40 CFR 63, Subpart EEE). [A complete copy of 40 CFR 63, Subpart EEE is in Section RR.] Pursuant to 40 CFR 63.1200 and 63.1206(a)(2), the Permittee must comply with 40 CFR 63, Subpart EEE on and after October 14, 2008, or such other compliance date authorized pursuant to 40 CFR 63.6.

(b) The terms used in requirements of 40 CFR 63, Subpart EEE are defined pursuant to 40 CFR 63.1201.

(c) The implementation and enforcement provisions set forth in 40 CFR 63.1214 apply.

E.10.3 General Provisions Relating to Hazardous Waste Combustors [40 CFR 63, Subpart A]

The table that follows sets forth provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, with which the Permittee must comply for the affected sources, H-530A and H-530B, except as provided in 40 CFR 63.1200(c) and Table 1 to 40 CFR 63, Subpart EEE.

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.1	Applicability
63.3	Units and abbreviations
63.4	Prohibited activities and circumvention
63.6(a)	Compliance with standards and maintenance requirements: Applicability
63.6(b)(1), (2), (4), (5), and (7)	Compliance dates for new and reconstructed affected sources
63.6(c)(1)	Compliance dates for existing sources
63.6(c)(5)	Compliance dates for existing sources
63.6(e)(1)	Operation and maintenance requirements
63.6(e)(3)(i) and (iv)-(ix)	Operation and maintenance requirements
63.6(f)	Compliance with nonopacity standards
63.6(g)	Use of an alternative nonopacity emission standard
63.12	State authority and delegations
63.14	Incorporations by reference
63.15	Performance Track Provisions

E.10.4 Liquid fuel boilers [40 CFR 63, Subpart EEE]

(a) The following table sets forth provisions of 40 CFR 63, Subpart EEE with which the Permittee must comply for each of the affected sources, H-530A and H-530B:

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1200(a)	Who is subject to these regulations?
63.1206(a)(2)(ii)	Compliance date – new or reconstructed sources
63.1206(b)(1)	Compliance with standards - applicability
63.1206(b)(2)-(4)	Compliance with standards
63.1206(b)(5)	Changes in design, operation, or maintenance
63.1206(b)(16)(ii)	Compliance with subcategory standards for liquid fuel boilers
63.1206(c)(1)(i)	Operating requirements
63.1206(c)(1)(iii)	Operating requirements
63.1206(c)(2)(v)	Operating under the startup, shutdown, and malfunction plan
63.1206(c)(3)(i)	Automatic waste feed cutoff (AWFCO)
63.1206(c)(3)(iii)	Restarting waste feed

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1206(c)(3)(iv)	Failure of the AWFCO
63.1206(c)(3)(v)	Corrective measures
63.1206(c)(3)(vii)	Testing the AWFCO and associated alarms
63.1206(c)(5)(i)(A)	Combustion system leaks
63.1206(c)(6)(i), (ii), (iv), (v), and (vi)	Operator training and certification
63.1206(c)(7)	Operation and maintenance plan
63.1207(h)	Operating conditions during subsequent testing
63.1207(j)(1)(ii)	Notification of compliance
63.1207(k)	Failure to submit a timely notification of compliance
63.1207(l)(1)	Failure of performance test
63.1209(i)	When an operating parameter is applicable to multiple standards
63.1209(j)(1, 3 and 4)	DRE
63.1209(l)(1)(ii)	Feedrate of mercury
63.1209(l)(1)(v)	Extrapolation of feedrate levels
63.1209(m)(3)	Particulate matter; maximum ash feedrate
63.1209(n)(2)(i)	Maximum feedrate of semivolatile and low volatile metals
63.1209(n)(2)(v)(A)(1) and (2)	Semivolatile metals
63.1209(n)(2)(v)(B)(1)	Chromium
63.1209(n)(2)(vi)	LVM metals for pumpable wastes
63.1209(n)(2)(vii)	Extrapolation of feedrate levels
63.1209(n)(4)	Maximum total chlorine and chloride feedrate
63.1209(o)(1)(ii)(A)	Hydrogen chloride and chlorine gas - Feedrate of total chlorine and chloride
63.1210(d)(2)	Notification of compliance
63.1217(a)(1)(ii)	Emission limits for existing sources (carbon monoxide or hydrocarbon)
63.1217(a)(2)(ii)	Emission limits for existing sources (mercury)
63.1217(a)(3)(ii)	Emission limits for existing sources (cadmium and lead combined) – except for an area source
63.1217(a)(4)(ii)	Emission limits for existing sources (chromium) – except for an area source
63.1217(a)(5)(i)	Emission limits for existing sources (carbon monoxide)
63.1217(a)(6)(ii)	Emission limits for existing sources (hydrogen chloride and chlorine) – except for an area source

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1217(a)(7)	Emission limits for existing sources (particulate matter) – except for an area source
63.1217(c)(1) and (3)	Destruction and removal efficiency (DRE) standard – 99.99% DRE
63.1217(d)	Significant figures
63.1217(f)	Elective standards for area sources

(b) Except as provided in 40 CFR 63.1206(c), the Permittee must operate each of the affected sources H-530A and H-530B only under the operating requirements specified in the Notification of Compliance. Pursuant to 40 CFR 63.1206(c)(1)(iv) and (v), the emission limits and operating parameter limits from the Notification of Compliance for each of the affected sources H-530A and H-530B are incorporated in (1) and (2) below.

(1) Emission Limits

Pollutant	**Emission Limit**	**Requirements for Operating Parameter Limits**
Dioxins/Furans	63.1217(a)(1)(ii) No numerical limit for Dioxins/Furans (but one-time testing required per 63.1207(b)(3)) CO limit of 100 ppmv, dry basis, corrected to 7% O_2, as an hourly rolling average (HRA)	None applicable
Mercury	63.1217(a)(2)(ii) 4.2×10^{-5} lb Hg attributable to the hazardous waste per MM BTU heat input from the hazardous waste	63.1209(l)(1)(ii)(A) and (B)
CO and THC	63.1217(a)(5)(i) CO: 100 ppmv dry basis corrected to 7% O_2 as an HRA THC: 10 ppmvd corrected to 7% O_2 as an HRA, only measured during DRE testing	63.1209(a)(7); 63.1209(j)(4)
DRE	63.1217(c)(1) and (3) 99.99%	63.1209(j)(1), (3), and (4)

(2) Operating Parameter Limits

Pollutant	**Operating Parameter**	Operating Parameter Limit	Limit Basis
DRE (63.1209(j)(4))	Operation of Firing System Atomizing Steam Pressure	35 psi (above waste fuel feed pressure)	Hourly Rolling Average
DRE (63.1209(j)(1))	Minimum Combustion Chamber Temperature	1735 °F (H-530A) 1742 °F (H-530B)	Hourly Rolling Average*
DRE (63.1209(j)(4))	Maximum Production Rate (as measured by total thermal input rate)	74 MMBTU/hr	Hourly Rolling Average

CO (63.1209(a)(7)) DRE (63.1209(j)(4))	Maximum CO Concentration (corrected to 7% O_2)	100 ppmvd	Hourly Rolling Average
Pollutant	**Operating Parameter**	**Feedrate Limit** [a]	Limit Basis
DRE (63.1209(j)(3))	Maximum Hazardous Waste Feed Rate	4443 lb/hr (H-530A) 4444 lb/hr (H-530B)	Hourly Rolling Average*
Mercury (63.1209(l)(1)(ii)(A) and (B))	Maximum Mercury Feed Rate	4.2×10^{-5} lb/MMBTU heat input from the hazardous waste	Annual Rolling Average*

[a] For each of the boilers, the total pumpable hazardous waste fuel feedrate and the total hazardous waste fuel feedrate are the same.

* Pursuant to 63.1209(r), the averaging periods specified for operating parameters are not-to-exceed averaging periods. The Permittee may elect to use shorter averaging periods.

(c) Except as provided in 40 CFR 63.1206(c), the Permittee must operate each of the affected sources H-530A and H-530B only under the operating requirements specified in the Notification of Compliance. The emission limits and operating parameter limits for the standards for cadmium and lead, the standards for chromium, the standards for hydrogen chloride and chlorine, and the standards for particulate matter for each of the affected sources H-530A and H-530B under 40 CFR 63.1217 from the Notification of Compliance are, pursuant to 40 CFR 63.1206(c)(1)(iv) and (v), incorporated in (1) and (2) below. These emission limits and operating parameter limits do not apply when the Permittee operates under the Alternative Operating Scenario provided in Condition E.10.5.

(1) Emission Limits

Pollutant	**Emission Limit**	**Requirements for Operating Parameter Limits**
Semi-Volatile Metals (SVM) (Lead (Pb) and Cadmium (Cd))	63.1217(a)(3)(ii) 8.2×10^{-5} lb SVM (cadmium and lead combined) attributable to the hazardous waste per MM BTU heat input from the hazardous waste	63.1209(n)(2)(v)(A)
Low Volatile Metal (Chromium (Cr))	63.1217(a)(4)(ii) 1.3×10^{-4} lb Cr attributable to the hazardous waste per MM BTU heat input from the hazardous waste	63.1209(n)(2)(v)(B)(1) 63.1209(n)(2)(vi) 63.1209(n)(2)(vii)
Hydrogen Chloride and Chlorine (HCl and Cl_2)	63.1217(a)(6)(ii) 5.1×10^{-2} lb combined HCl and Cl_2 attributable to the hazardous waste per MM BTU heat input from the hazardous waste	63.1209(n)(4) 63.1209(o)(1)(ii)(A)
Particulate Matter (PM)	63.1217(a)(7) 80 mg/dscm corrected to 7% O_2	63.1209(m)(3)

(2) Operating Parameter Limits

Pollutant	Operating Parameter	Feedrate Limit [a]	Limit Basis
Semi-Volatile Metals (SVM) (Lead (Pb) and Cadmium (Cd)) (63.1209(n)(2)(v)(A))	Maximum SVM Feed Rate (Lead (Pb) and Cadmium (Cd))	8.2×10^{-5} lb/MMBTU heat input from the hazardous waste	Annual Rolling Average*
Low Volatile Metal (Chromium (Cr)) (63.1209(n)(2)(v)(B)(1); 63.1209(n)(2)(vi) and (vii))	Maximum LVM (Cr) Feed Rate	1.3×10^{-4} lb/MMBTU heat input from the pumpable hazardous waste	12-Hour Rolling Average*
Particulate Matter (PM) (63.1209(m)(3))	Maximum Ash Feed Rate	4.4 lb/hr (H-530A) 4.4 lb/hr (H-530B)	12-Hour Rolling Average*
Hydrogen Chloride and Chlorine (HCl and Cl_2) (63.1209(n)(4); 63.1209(o)(1)(ii)(A))	Maximum Chlorine Feed Rate Total Chlorine and Chloride	5.1×10^{-2} lb/MMBTU heat input from the hazardous waste	12-Hour Rolling Average*

a. At the Mt Vernon facility the total pumpable hazardous waste fuel feedrate and the total hazardous waste fuel feedrate are the same.
* Pursuant to 63.1209(r), the averaging periods specified for operating parameters are not-to-exceed averaging periods. The Permittee may elect to use shorter averaging periods.

E.10.5 Alternative Operating Scenario for Area Sources [40 CFR 63, Subpart EEE]

Each of the affected sources, H-530A and H-530B, is an area source. Therefore, each affected source may operate under the standards at 40 CFR 266.105, 266.106, and 266.107 in lieu of the standards set forth in Condition E.10.4(c). Accordingly, when operating under this Alternative Operating Scenario, the Permittee is not required to comply with the emission limits and operating parameter limits for the standards for cadmium and lead, the standards for chromium, the standards for hydrogen chloride and chlorine, and the standards for particulate matter under 40 CFR 63.1217, which are set forth in Condition E.10.4(c).

Compliance Determination Requirements

E.10.6 Testing and Monitoring Requirements Relating to Hazardous Waste Combustors [40 CFR 63, Subpart EEE]

(a) The table that follows provides performance testing and monitoring requirements of 40 CFR 63, Subpart A, with which the Permittee must comply, as applicable, for each of the affected sources H-530A and H-530B, except as provided in 40 CFR 63.1200(c) and Table 1 of 40 CFR 63, Subpart EEE.

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.7(a)(1) through (3)	Performance testing requirements
63.7(c)	Quality assurance program
63.7(d)	Performance testing facilities
63.7(e)(1) through (3)	Conduct of performance tests
63.7(f)	Use of an alternative test method
63.7(h)	Waiver of performance tests

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.8(a)(1) and (2)	Monitoring requirements
63.8(b)	Conduct of monitoring
63.8(c)(1) through (3)	Operation and maintenance of continuous monitoring systems
63.8(c)(4)(ii)	Operation and maintenance of continuous monitoring systems
63.8(c)(6) and (7)	Operation and maintenance of continuous monitoring systems
63.8(d)	Quality control program
63.8(e)(1)	Performance evaluation of continuous monitoring systems
63.8(e)(4)	Conduct of performance evaluation and performance evaluation dates
63.8(f)	Use of an alternative monitoring method
63.8(g)	Reduction of monitoring data

(b) The table that follows provides performance testing and monitoring requirements of 40 CFR 63, Subpart EEE, with which the Permittee must comply, as applicable, for each of the affected sources H-530A and H-530B:

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1206(b)(5)(i)(B)	Performance test
63.1206(b)(6)	Compliance with the carbon monoxide and hydrocarbon emission standard
63.1206(b)(7)(i) and (iii)	Compliance with the DRE standard
63.1206(b)(12)	Documenting compliance with the standards based on performance testing
63.1206(b)(16)(i) and (ii)	Compliance with subcategory standards for liquid fuel boilers
63.1207(a)	What are the performance testing requirements?
63.1207(b)(1)	Comprehensive performance test
63.1207(b)(3)(i), (ii), (v) and (vi)	One-time dioxin/furan test for sources not subject to a numerical dioxin/furan standard
63.1207(c)(1)	Initial comprehensive performance test
63.1207(c)(2)(i) and (iv)	Data in lieu of the initial comprehensive performance test
63.1207(d)(1) and (3)	Frequency/duration of testing
63.1207(g)(1)(i)(A)	Operating conditions during testing
63.1207(g)(1)(ii) and (iii)(A)	Operating conditions during testing
63.1207(h)	Operating conditions during subsequent testing

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1207(l)(1)(ii)(B)	Failure of performance test
63.1207(m)(2) and (3)	Waiver of performance test – Emission standards based on hazardous waste thermal concentration
63.1208(b)(1) through (8)	What are the test methods?
63.1209(a)(1)(i) and (iii)	What are the monitoring requirements?
63.1209(a)(2)	Performance specifications
63.1209(a)(3)	Carbon monoxide readings exceeding the span
63.1209(a)(6)	Calculation of rolling averages
63.1209(a)(7)	Operating parameter limits for hydrocarbons
63.1209(b)(1), (2)(i), (3), and (4)	Other continuous monitoring systems
63.1209(b)(5)	Calculation of rolling averages
63.1209(c)	Analysis of feedstreams
63.1209(d)	Performance evaluations
63.1209(e)	Conduct of monitoring
63.1209(f)(1) and (2)	Operation and maintenance of continuous monitoring systems
63.1209(g)	Alternative monitoring requirements other than CEMS
63.1209(h)	Reduction of monitoring data
63.1209(i)	When an operating parameter is applicable to multiple standards
63.1209(j)(1), (3), and (4)	DRE
63.1209(l)(1)(ii)(A) and (B)	Mercury
63.1209(m)(3)	Maximum ash feedrate
63.1209(n)(2)(i)	Semivolatile metals and low volatile metals
63.1209(n)(2)(v)(A)(1) and (2)	Semivolatile metals
63.1209(n)(2)(v)(B)(1)	Chromium
63.1209(n)(2)(vi)	LVM limits for pumpable wastes
63.1209(n)(2)(vii)	Extrapolation of feedrate levels
63.1209(n)(4)	Maximum total chlorine and chloride
63.1209(o)(1)(ii)(A)	Feedrate of total chlorine and chloride
63.1209(r)	Averaging periods

(c) The Permittee commenced the initial comprehensive performance test required by 40 CFR 63.1207(c) on March 10, 2009. The Permittee must conduct testing periodically as required by 40 CFR 63.1207(d)(1).

Recordkeeping and Reporting Requirements

E.10.7 Record Keeping Requirements [40 CFR 63, Subpart EEE]

(a) The table that follows provides recordkeeping requirements of 40 CFR 63, Subpart A - General Provisions, with which the Permittee must comply for each of the affected sources H-530A and H-530B:

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.6(e)(3)(iii)-(v)	Startup, shutdown, and malfunction plan
63.10(b)	General recordkeeping requirements
63.10(c)	Additional recordkeeping requirements for sources with continuous monitoring systems

(b) The table that follows provides the specific applicable recordkeeping requirements of 40 CFR 63, Subpart EEE, with which the Permittee must comply for each of the affected sources H-530A and H-530B:

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1206(b)(5)(ii)	Changes that will not affect compliance
63.1206(b)(11)	Calculation of hazardous waste residence time
63.1206(c)(2)(i)	Startup, shutdown, and malfunction plan
63.1206(c)(2)(iii)	Startup, shutdown, and malfunction plan
63.1206(c)(2)(iv)	Startup, shutdown, and malfunction plan
63.1206(c)(2)(v)(A)(3)(ii)	Startup, shutdown, and malfunction plan
63.1206(c)(2)(v)(B)(1)	Compliance with AWFCO requirements when burning hazardous waste during startup and shutdown
63.1206(c)(3)(v)	Corrective measures
63.1206(c)(3)(vii)	Testing
63.1206(c)(5)(ii)	Combustion system leaks
63.1206(c)(6)(iv)(A)	Operator training and certification
63.1206(c)(6)(v)	Operator training and certification
63.1206(c)(6)(vii)	Operator training and certification
63.1206(c)(7)	Operation and maintenance plan
63.1209(c)(2)	Feedstream analysis plan
63.1209(c)(4)	Compliance with federate limits
63.1211(b)	Summary of recordkeeping requirements

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1211(c)	Documentation of compliance
63.1212(a)	Certification of intent to comply

(c) All records required to be maintained by Condition E.10.7 shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

(d) The Permittee shall submit the reports and records required to be submitted by Condition E.10.6 to the address listed in Section C - General Reporting Requirements of this permit.

E.10.8 National Emissions Standards for Hazardous Air Pollutants for Hazardous Waste Combustors-Notification Requirements [40 CFR 63, Subpart EEE]

(a) The table that follows provides notification and reporting requirements of 40 CFR 63, Subpart A - General Provisions, with which the Permittee must comply for each of the affected sources H-530A and H-530B, except as otherwise specified in 40 CFR 63, Subpart EEE.

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.5	Preconstruction review and notification requirements
63.6(e)(3)(iii) and (iv)	Startup, shutdown, and malfunction plan
63.7(a)(4)	Applicability and performance test dates
63.7(b)	Notification of performance test
63.7(c)	Quality assurance program
63.7(g)	Data analysis, recordkeeping, and reporting
63.8(c)(8)	Operation and maintenance of continuous monitoring systems
63.8(e)(2), (3), and (5)	Performance evaluation of continuous monitoring systems
63.9(a)	Applicability and general information
63.9(b)	Initial notifications
63.9(c)	Request for extension of compliance
63.9(e)	Notification of performance test
63.9(g)	Additional notification requirements for sources with continuous monitoring systems
63.9(h)	Notification of compliance status
63.9(i)	Adjustment to time periods or postmark deadlines for submittal and review of required communications
63.9(j)	Change in information already provided

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.10(a)	Applicability and general information
63.10(d)(1)	General reporting requirements
63.10(d)(2)	Reporting results of performance tests
63.10(d)(4)	Progress reports
63.10(d)(5)(i)	Periodic startup, shutdown, and malfunction reports
63.10(d)(5)(ii)	Immediate startup, shutdown, and malfunction reports
63.10(e)(1)	Additional reporting requirements for sources with continuous monitoring systems - general
63.10(e)(2)(i)	Reporting of continuous monitoring system performance evaluations
63.10(e)(3)	Excess emissions and continuous monitoring system performance report and summary report
63.10(f)	Waiver of recordkeeping and reporting requirements
63.13	Addresses of State air pollution control agencies and EPA Regional Offices

(b) The table that follows provides notification and reporting requirements of 40 CFR 63, Subpart EEE, with which the Permittee must comply for each of the affected sources H-530A and H-530B:

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1206(b)(5)(i)(A) and (B)	Changes in design, operation, or maintenance - Notification
63.1206(b)(11)	Calculation of hazardous waste residence time
63.1206(c)(1)(ii)	Operating requirements - General
63.1206(c)(2)(v)(A)(3)(ii)	Excessive exceedances during malfunctions
63.1206(c)(3)(vi)	Excessive exceedance reporting
63.1206(c)(5)(ii)	Combustion system leaks
63.1207(b)(3)(iv)	One-Time dioxin/furan test
63.1207(c)(2)(ii)	Data in lieu of initial comprehensive performance test
63.1207(e)(1)(i)	Comprehensive performance test
63.1207(e)(2)	Notification of performance test and CMS performance evaluation, and approval of test plan and CMS performance evaluation plan
63.1207(e)(3)	Petition for time extensions if Administrator fails to approve or deny test plans
63.1207(f)(1)(i) – (xii), (xv), (xix), (xxvi), and (xxvii)	Content of performance test plan

Applicable 40 CFR Part 63, Subpart EEE Requirements	Regulatory Citation Description
63.1207(g)(1)(iii)(A)	Steady-state conditions
63.1207(i)	Time extension for subsequent performance test
63.1207(j)(1)(i)	Notification of compliance – comprehensive performance test
63.1207(j)(3)-(5)	Notification of compliance
63.1207(k)(3)	Failure to submit a timely notification of compliance
63.1207(l)(1)(ii)(C)	Failure of performance test
63.1207(l)(3)	Failure of performance test
63.1207(m)(5)	Waiver of performance test
63.1210(a)	What are the notification requirements? Summary of requirements
63.1210(d)(1) and (3)	Notification of compliance
63.1211(a)	Summary of reporting requirements

(c) The Notification of Compliance, submitted pursuant to 40 CFR 63.1207(j) and 63.1210(d), requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

(d) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it is operating under as detailed in Condition E.10.5. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(e) The Permittee shall submit the notifications, reports and records, required to be submitted by Condition E.10.8, to the address listed in Section C - General Reporting Requirements of this permit.

Section E consists of the following Sections: E.1, E.2, E.3, E.4, E.5, E.6, E.7, E.8, E.9, E.10, four (4) Part 70 Quarterly Reporting Forms, and one (1) Part 70 Semi-Annual Natural Gas Fired Boiler Certification Form.

Condition E.10.8 concludes the Section E requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section
Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002
Facility: E-244, Stack/Vent ID 03-002; Condition E.2.1(a)(1)
Parameter: VOC
Limit: 12.6 tons of VOC per 365-day period, rolled on a daily basis

Year: _____ **Quarter:** _____

Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period	Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period
1			**17**		
2			**18**		
3			**19**		
4			**20**		
5			**21**		
6			**22**		
7			**23**		
8			**24**		
9			**25**		
10			**26**		
11			**27**		
12			**28**		
13			**29**		
14			**30**		
15			**31**		
16			**no. of deviations**		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section
Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002
Facility: Combined Oxidizers and Oxidate Settlers; Condition E.2.1(a)(2)
Parameter: VOC
Limit: 237 tons of VOC per 365-day period, rolled on a daily basis

Year: _____ **Quarter:** _____

Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period	Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period
1			**17**		
2			**18**		
3			**19**		
4			**20**		
5			**21**		
6			**22**		
7			**23**		
8			**24**		
9			**25**		
10			**26**		
11			**27**		
12			**28**		
13			**29**		
14			**30**		
15			**31**		
16			**no. of deviations**		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section
Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002
Facility: PhTCU; Condition E.2.1(b)
Parameter: NOx
Limit: Less than 40 tons per 365-day period, rolled on a daily basis

Year: _____ **Quarter:** _____

Day	NO_X Emission this day (ton/day)	NO_X Emissions for the last 365-day period	Day	NO_X Emission this day (ton/day)	NO_X Emissions for the last 365-day period
1			**17**		
2			**18**		
3			**19**		
4			**20**		
5			**21**		
6			**22**		
7			**23**		
8			**24**		
9			**25**		
10			**26**		
11			**27**		
12			**28**		
13			**29**		
14			**30**		
15			**31**		
16			**no. of deviations**		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section
Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002
Facility: C-650, Stack/Vent ID 03-005; Condition E.3.1(a)
Parameter: VOC
Limit: 75.5 tons of VOC per 365-day period, rolled on a daily basis

Year: _____ **Quarter:** _____

Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period	Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period
1			**17**		
2			**18**		
3			**19**		
4			**20**		
5			**21**		
6			**22**		
7			**23**		
8			**24**		
9			**25**		
10			**26**		
11			**27**		
12			**28**		
13			**29**		
14			**30**		
15			**31**		
16			**no. of deviations**		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	SABIC Innovative Plastics Mt. Vernon, LLC
Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.:	T129-30384-00002
Facility:	H-530A andH-530B

☐ Natural Gas Only
☐ Alternate Fuel burned
From: _____ To: _____

Submitted by:
Signature:
Printed Name:
Title/Position:
Phone:
Date:

SECTION F.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: BPA, Buildings 15, 31, 56 and 49

BPA Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source or affected facility subject to the applicable regulation.

(a) The BPA Chemical Manufacturing Process Unit (BpaCMPU) subject to 40 CFR 63, Subpart F, G, and H is identified by its primary product, which is Bisphenol-A. The BpaCMPU consists of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture Bisphenol-A. A chemical manufacturing process unit consists of more than one unit operation. The BpaCMPU includes reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems.

(b) The affected facilities subject to 40 CFR 60, Subpart NNN are identified as BpaV-6100. The affected facilities consist of a device or vessel in which distillation operations occur, including all associated internals (such as tray or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(c) [Reserved]

(d) BpaVV is an affected facility in the BPA Process Unit subject to 40 CFR 60, Subpart VV. BpaVV consists of components assembled to produce Bisphenol-A and includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valve or lines, valves, and flanges or other connectors in VOC service and any other devices or systems required by Subpart VV.

(e) [Reserved]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.1.1 [Reserved]

F.1.2 [Reserved]

F.1.3 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]

The table that follows sets forth provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source BpaCMPU, except as provided in 40 CFR 63.103(a) and Table 3 of 40 CFR 63, Subpart F.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.6(e)	Compliance with standards and maintenance requirements
63.6(f)	Compliance with standards and maintenance requirements
63.8(b)	Monitoring requirements
63.8(c)	Monitoring requirements
63.11(a)	Control device requirements
63.12(c)	State authority and delegations

F.1.4 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to affected facilities BpaV-6100 and BpaVV.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	BpaV-6100	BpaVV
60.11(a)	Compliance with standards and maintenance requirements	X	X
60.11(d)	Compliance with standards and maintenance requirements	X	X
60.13(e)	Monitoring requirements	X	X

F.1.5 Hazardous Air Pollutants (HAPs) [326 IAC 20] [40 CFR 63, Subparts F and G]

The table that follows provides the specific applicable emission standards of the National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON) [40 CFR 63, Subparts F and G] that apply to the BpaCMPU.

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
AA.1(a)	63.102(a)	General Standards
BB.1(a)	63.112(a)	Emission Standard
BB.1(c)	63.112(c)	Emission Standard
BB.1(e)	63.112(e)	Emission Standard
BB.1(f)	63.112(f)	Emission Standard
BB.4(a)	63.132(a)	Process Wastewater Provisions -- General
BB.4(f)	63.132(f)	Process Wastewater Provisions -- General

F.1.6 [Reserved]

Compliance Determination Requirements

F.1.7 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]

The table that follows provides performance testing requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source BpaCMPU, except as provided in 40 CFR 63.103(a) and Table 3 of 40 CFR 63, Subpart F.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.7(a)(3)	Performance testing requirements
63.7(e)	Performance testing requirements

F.1.8 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows provides performance testing requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to affected facilities BpaV-6100 and BpaVV.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	BpaV-6100	BpaVV
60.8(a)	Performance tests	X	X
60.8(b)	Performance tests	X	X
60.8(c)	Performance tests	X	X
60.8(d)	Performance tests	X	X
60.8(e)	Performance tests	X	X
60.8(f)	Performance tests	X	X

F.1.9 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subparts F and G]

Pursuant to 40 CFR 63, Subparts F and G, the HON emission point group determination requirements for the affected source, BpaCMPU, are identified in the following table:

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
AA.4(b)	63.103(b)	General Compliance, Reporting, and Recordkeeping Provisions
AA.5	63.107	Identification Of Process Vents Subject To 40 CFR 63, Subpart F
BB.6(a)	63.115(a)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(b)	63.115(b)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(c)	63.115(c)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(d)	63.115(d)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(e)(1)	63.115(e)(1)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.6(f)	63.115(f)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.7(c)	63.132(c)	Process Wastewater Provisions -- General
BB.8(a)	63.144(a)	Process Wastewater Provisions -- Test Methods and Procedures for Determining Applicability and Group 1/Group 2 Determinations

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
BB.8(b)	63.144(b)	Process Wastewater Provisions -- Test Methods and Procedures for Determining Applicability and Group 1/Group 2 Determinations
BB.8(c)	63.144(c)	Process Wastewater Provisions -- Test Methods and Procedures for Determining Applicability and Group 1/Group 2 Determinations

F.1.10 Methods and Procedures [326 IAC 20-11] [40 CFR 60, Subpart NNN]

Pursuant to 40 CFR 60, Subpart NNN, test methods and procedures applicable to affected facilities BpaV-6100 are identified in the following table:

Section HH Permit Condition	Applicable 40 CFR Part 60, Subpart NNN Requirement	Regulatory Citation Title
HH.3(a)	60.664(a)	Test Methods and Procedures
HH.3(b)	60.664(b)	Test Methods and Procedures
HH.3(d)	60.664(e)	Test Methods and Procedures
HH.3(e)	60.664(f)	Test Methods and Procedures
HH.3(f)	60.664(g)	Test Methods and Procedures
HH.3(g)	60.664(h)	Test Methods and Procedures

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

F.1.11 [Reserved]

F.1.12 [Reserved]

F.1.13 Record Keeping and Reporting Requirements

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source BpaCMPU, except as provided in 40 CFR 63.103(a) and Table 3 of 40 CFR 63, Subpart F.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.5	Preconstruction review and notification requirements

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.9(a)	Notification requirements
63.9(b)	Notification requirements
63.10(a)	Recordkeeping and reporting requirements
63.10(d)	Recordkeeping and reporting requirements
63.13(a)	Addresses of State air pollution control agencies and EPA Regional Offices
63.13(b)	Addresses of State air pollution control agencies and EPA Regional Offices

(b) The table that follows provides record keeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to affected facilities BpaV-6100and BpaVV.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	BpaV-6100	BpaVV
60.7(a)	Notification and record keeping	X	X
60.7(b)	Notification and record keeping	X	
60.7(c)	Notification and record keeping		X
60.7(d)	Notification and record keeping	X	
60.7(f)	Notification and record keeping	X	X
60.7(g)	Notification and record keeping	X	X
60.7(h)	Notification and record keeping	X	X

(c) The table that follows provides the specific applicable record keeping and reporting standards of the National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON) [40 CFR 63, Subparts F and G] that apply to the affected source BpaCMPU.

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
AA.6(b)	63.103(b)	General Compliance, Reporting, and Recordkeeping Provisions

Section AA or BB Permit Condition	Applicable 40 CFR Part 63, Subpart F or Subpart G Requirement	Regulatory Citation Description
AA.6(c)	63.103(c)	General Compliance, Reporting, and Recordkeeping Provisions
AA.6(d)	63.103(d)	General Compliance, Reporting, and Recordkeeping Provisions
BB.10(e)(2)	63.115(e)(2)	Process Vent Provisions -- Methods and Procedures for Process Vent Group Determinations
BB.11(c)	63.117(c)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests
BB.11(f)	63.117(f)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests
BB.13(b)	63.146(b)	Process Wastewater Provisions -- Reporting
BB.14(f)	63.147(f)	Wastewater Provisions: Reporting and Recordkeeping
BB.16(a)	63.151(a)	Initial Notification
BB.17(a)	63.152(a)	General Reporting and Continuous Records
BB.17(b)	63.152(b)	General Reporting and Continuous Records
BB.17(c)	63.152(c)	General Reporting and Continuous Records
BB.17(d)	63.152(d)	General Reporting and Continuous Records
BB.17(e)	63.152(e)	General Reporting and Continuous Records

(d) If a process change is made to the affected source, BpaCMPU, which changes a process vent group status, then the applicable reporting provisions of 40 CFR 63.118(g), (h), (i), (j), and (k) shall apply.

(e) If changes occur to emission points in the affected source, BpaCMPU, which affect the Permittee's emission averaging plan, as described in 40 CFR 63.151(i), then the reporting provisions of 63.151(i) shall be followed.

(f) If changes occur to emission points in the affected source, BpaCMPU, which are not included in the Permittee's emission averaging plan, as described in 40 CFR 63.151(j), then the reporting provisions of 63.151(j) shall be followed.

(g) If the Permittee requests to monitor an alternative parameter; requests alternatives to the continuous operating parameter monitoring and recordkeeping provisions; or requests additional alternative controls or operating scenarios for the affected source, BpaCMPU, the applicable reporting provisions of 40 CFR 63.151(f), (g) or (h) shall be followed.

(h) All records required to be maintained by Condition F.1.13 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(i) The Permittee shall submit the reports and records required to be submitted by Condition F.1.13 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION F.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: BPA, Buildings 15, 31, 56 and 49

BPA Process Operations

(f) The BPA process operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate; the date of construction; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
04-050	H-6060	BPA III VENT INCINERATOR	None	None	N/A	N/A

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
04-074	V-6100	EXTRACTION KO TANK IN BPA I, II, & III	None	None	Less than 40 m^3	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.2.1 Prevention of Significant Deterioration (PSD) Synthetic Minor Limit [326 IAC 2-2]

Pursuant to PC (65) 1563, Condition 1(c), issued on September 21, 1984, as revised through the Title V permit, emission unit H-6060 shall not exceed 18 tons of VOC emissions per 365-day period, rolled on a daily basis, such that the total emissions from the 1984 modification has a VOC emission increase of less than 40 tons per year. Compliance with this limit renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

F.2.2 Hazardous Air Pollutants (HAPs) [326 IAC 20] [40 CFR 63, Subpart G]

(a) Pursuant to 40 CFR 63.112(e), the Permittee shall comply with the National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON) [40 CFR 63, Subpart G] by meeting the applicable emission standards and monitoring provisions of 40 CFR 63.113 through 40 CFR 63.118

for the Group 1 process vent, H-6060, and the Group 2 process vent V-6100. The table that follows provides the specific applicable control and monitoring provisions of the HON that apply to these process vents and the specific condition number where descriptions of these provisions can be found in Section BB.

(1) Pursuant to 40 CFR 63.113(a)(2), the Group 1 process vent, H-6060, is controlled by an incinerator to meet these provisions by reducing emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume.

(2) [Reserved]

(3) Pursuant to 40 CFR 63.113(f), the Group 2 process vent, V-6100, maintains a flow rate less than 0.005 standard cubic meter per minute to meet these provisions. Instead of complying with the provisions listed in the table that follows, the Permittee may elect one of the alternative operating scenarios for process vent V-6100 as described in Condition F.2.3.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Description	H-6060	V-6100
BB.2(a)	63.113(a)	Process Vent Provisions -- Reference Control Technology	X	
BB.2(f)	63.113(f)	Process Vent Provisions -- Reference Control Technology		X
BB.2(h)	63.113(h)	Process Vent Provisions -- Reference Control Technology	X	
BB.3(a)	63.114(a)	Process Vent Provisions -- Monitoring Requirements	X	
BB.3(d)	63.114(d)	Process Vent Provisions -- Monitoring Requirements	X	
BB.3(e)	63.114(e)	Process Vent Provisions -- Monitoring Requirements	X	

(b) To indicate proper operation of the control or recovery device and pursuant to 40 CFR 63.114(e), the Permittee has established the following range, as determined in the stack test or engineering assessment as allowed pursuant to 40 CFR 63.152(b)(2)(ii), for each parameter monitored under 40 CFR 63.114(a) and (b).

Emission Unit	Control or Recovery Device To Be Monitored	Parameter(s) To Monitor	Parameter Range
H-6060	Incinerator (H-6060)	Firebox Temperature	≥ 1492°F

F.2.3 Alternative Operating Scenario for V-6100 to comply with HON [326 IAC 20] [40 CFR 63, Subpart G]

Instead of complying with the provisions of Condition F.2.2(a)(3), the Permittee may elect to comply with one of the alternative operating scenarios described in this condition.

(a) The Permittee may elect to designate the Group 2 process vent V-6100 as a HON Group 1 process vent and comply with the alternative operating scenario of this condition. If this alternative is chosen, then pursuant to 40 CFR 63.113(a)(2), the Permittee shall route the V-6100 process vent to the existing direct flame incinerator identified as H-6060 in order to reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume on a dry basis corrected to 3-percent oxygen, whichever is less stringent. The table that follows provides the specific applicable HON standards and monitoring provisions that apply to this process vent and the condition number where descriptions of the provisions can be found in Section BB; or

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Title	to H-6060
BB.2(a)	63.113(a)	Process Vent Provisions -- Reference Control Technology	X
BB.2(h)	63.113(h)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(a)	63.114(a)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(d)	63.114(d)	Process Vent Provisions -- Monitoring Requirements	X
BB.3(e)	63.114(e)	Process Vent Provisions -- Monitoring Requirements	X

(b) If this alternative is chosen, then pursuant to 40 CFR 63.113(e), the Permittee may elect to maintain a total resource effectiveness (TRE) greater than 4.0 for the Group 2 process vent V-6100 and comply with the provisions of calculating a TRE index value in 40 CFR 63.115 and the reporting and recordkeeping provisions in 40 CFR 63.117(b) and 63.118(c).

F.2.4 VOC Emissions from Synthetic Organic Chemical Manufacturing Industry [326 IAC 12] [40 CFR 60, Subpart NNN]

(a) Pursuant to 40 CFR 60.660(c)(6), if the Permittee maintains the flow rate of the Extraction KO Tank, identified as V-6100, to less than 0.008 standard cubic meters per minute, then V-6100 is exempt from all provisions of Subpart NNN except for 40 CFR 60.664(h); and 60.665 (i), (l)(5), and (o). Instead of complying with this provision, the Permittee may elect one of the alternative operating scenarios for process vent V-6100 as described in Condition F.2.5.

(b) [Reserved]

F.2.5 Alternative Operating Scenario for V-6100 to comply with 40 CFR 60, Subpart NNN [326 IAC 12] [40 CFR 60, Subpart NNN]

Instead of complying with the provisions of Condition F.2.4(a), the Permittee may elect to comply with one of the alternative operating scenarios described in this condition.

(a) If this alternative (F.2.5(a)) is chosen, the Permittee may elect to designate the process vent V-6100 as a HON Group 1 process vent and comply with the alternative operating scenario of this condition. If this alternative is chosen, then pursuant to 40 CFR 60.662(a), the Permittee shall route the V-6100 process vent to the existing H-6060 incinerator in order to reduce emissions of Volatile Organic Compounds by 98 weight-percent or to a concentration of 20 parts per million by volume on a dry basis corrected to 3-percent oxygen, whichever is less stringent. Pursuant to 40 CFR 63.110(d)(4), the Permittee shall comply with the HON instead of the provisions of 40 CFR 60, Subpart NNN. Condition F.2.3(a) lists the applicable provisions; or

(b) If this alternative (F.2.5(b)) is chosen, then pursuant to 40 CFR 60.660(c)(4), the Permittee shall maintain a total resource effectiveness (TRE) greater than 8.0 for the process vent V-6100 and be exempt from all provisions of Subpart NNN except for 40 CFR 60.662; 60.664(e), (f), and (g); and 60.665 (h) and (l).

Compliance Determination Requirements

F.2.6 Volatile Organic Compounds (VOC) Control

For purposes of determining compliance with Condition F.2.1, the Permittee shall sum the VOC emissions during any 365-day period as follows:

$$\text{VOC Emissions} \equiv \left[\frac{1\text{ ton}}{2000\text{ lbs}}\right] \times \left[\left(T_{H6060} \times EF_{H6060}\right) + \left(T_{bypass} \times EF_{bypass}\right)\right]$$

Where:

T_{H6060}	=	Number of hours the process vented through H-6060 during the 365-day period;
T_{bypass}	=	Number of hours the process bypassed H-6060 during the 365-day period;
EF_{H6060}	=	Emission factor of 0.0453 lb VOC/hour or the emission factor determined in the most recent performance test, when the process is controlled by H-6060; and
EF_{bypass}	=	Emission factor of 2.5560 lb VOC/hour or the emission factor determined in the most recent performance test, when the process vent bypasses H-6060.

F.2.7 [Reserved]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

F.2.8 Monitoring for Incinerator H-6060

In order to demonstrate compliance with F.2.1, the Permittee shall monitor the incinerator controlling VOC emissions from BPA III, identified as H-6060. The monitoring pursuant to 40 CFR 63.114(a), Subpart G, as specified in Condition F.2.2 and detailed in Section BB.3(a)(1), satisfies this requirement. When for any three (3) hour average reading (arithmetic average of three contiguous one-hour periods), the Firebox Temperature is less than the parameter range established in Condition F.2.2(b), the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps, shall be considered a deviation from the limitation set forth in Condition F.2.1 of this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

F.2.9 Record Keeping and Reporting Requirements

(a) In order to document the compliance status with Condition F.2.1, the Permittee shall maintain daily records of the following:

(1) The number of hours the process is vented through H-6060 each day; the Permittee may presume this to be 24 hours per day;

(2) The number of hours the process bypassed H-6060 each day; and

(3) The amount of VOCs emitted from H-6060, calculated pursuant to Condition F.2.6, and including the amount of VOCs emitted from each type of venting option.

(b) A quarterly summary of the information to document the compliance status with Condition F.2.1 shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 40 CFR 63, Subpart G and to document the compliance status with Condition F.2.2, the Permittee shall keep records and submit reports as specified in the 40 CFR 63, Subpart G applicable requirements in the table below, as described in Section BB.

(1) If the Permittee chooses to comply with the alternative operating scenarios by rerouting the emission unit V-6100 to emission unit H-6060 as described in Condition F.2.3(a) and F.2.5(a), then the provisions that are applicable to emission unit H-6060 shown below, are also applicable to emission unit V-6100. [40 CFR 63.110(d)(4)]

(2) If the Permittee chooses to comply with the alternative operating scenario by maintaining a total resource effectiveness (TRE) greater than 4.0 for the Group 2 process vent V-6100 as described in Condition F.2.3(b), then the provisions

shown in the table below for the V-6100 TRE greater than 4.0 Alternative Operating Scenario are applicable to emission unit V-6100.

Section BB Permit Condition	Applicable 40 CFR Part 63, Subpart G Requirement	Regulatory Citation Description	H-6060	V-6100 TRE >4.0 alternative operating scenario	V-6100	V-6100 routed to H-6060
BB.11(a)	63.117(a)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests	X			X
BB.11(b)	63.117(b)	Process Vent Provisions -- Reporting and Recordkeeping Requirements for Group and TRE Determinations and Performance Tests				
BB.12(a)	63.118(a)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements	X			X
BB.12(c)	63.118(c)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements		X		
BB.12(d)	63.118(d)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements			X	
BB.12(f)	63.118(f)	Process Vent Provisions -- Periodic Reporting and Recordkeeping Requirements	X			X
BB.17(f)	63.152(f)	General Reporting and Continuous Records	X			X
BB.17(g)	63.152(g)	General Reporting and Continuous Records	X			X

(d) Pursuant to 40 CFR 60, Subpart NNN and in order to document compliance with Condition F.2.4, the Permittee shall keep records and submit reports as specified in the federal citations in the table below as described in Section HH. If the Permittee chooses to comply with the alternative operating scenario by maintaining a total resource effectiveness (TRE) greater than 8.0 for the process vent V-6100 as described in Condition F.2.5(b), then the provisions shown in the table below for the V-6100 TRE greater than 8.0 Alternative Operating Scenario are applicable to emission unit V-6100.

Section HH Permit Condition	Applicable 40 CFR Part 60, Subpart NNN Requirement	Regulatory Citation Title	V-6100	V-6100 TRE >8.0 alternative
HH.4(h)	60.665(h)	Reporting and Recordkeeping Requirements		X
HH.4(i)	60.665(i)	Reporting and Recordkeeping Requirements	X	
HH.4(l)	60.665(l)	Reporting and Recordkeeping Requirements	X	X
HH.4(o)	60.665(o)	Reporting and Recordkeeping Requirements	X	

(e) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of which scenarios it operates as detailed in Conditions F.2.3 and F.2.5. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(f) All records required to be maintained by Condition F.2.9 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(g) The Permittee shall submit the reports and records required to be submitted by Condition F.2.9 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION F.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: BPA, Buildings 15, 31, 56 and 49

<u>BPA Flaking, Loading, and Silo Operations and Transfer Operations</u>

(g)

(1) The BPA flaking, loading, and silo operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(2) A transfer operation located within the BpaCMPU is a HON MACT (40 CFR 63, Subpart G) Group 2 Transfer Rack identified as emission unit BPA1081TR.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
None	BPA1081TR	TRANSFER RACK	None	None	<0.65 million liters/yr	2008

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
04-026	V-701A BF	SILO 701A RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-027	V-339-BF	SILO 339 RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-028	V-338-BF	SILO 338 RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-029	V-335-BF	SILO 335 RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-030	V-507B-BF	SILO 507B RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-031	V-507A-BF	RECEIVER FOR BPA III STORAGE SILO V-507A IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-034	V-701B-BF	SILO 701B RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-035	V-701C-BF	SILO 701C RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-039	V-701D-BF	SILO 701D RECEIVER IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-040	V-701E-BF	SILO 701E BIN VENT IN BPA I	None	Bagfilter	7.5 tons/hr	N/A
04-064	V-5050-NF	SILO V-5050 RECEIVER (F-5052) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-065	V-5060-NF	SILO V-5060 BIN VENT (F-5062) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-066	F-801D-F	NORTHWEST TRUCK & RAIL LOADING STATION RECEIVER IN BPA II	None	Bagfilter	12 tons/hr	N/A
04-069	B-5030 A	BLOWER (B-5030A) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-070	B-5030 B	BLOWER (B-5030B) IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-083	RRLSF	SOUTHWEST TRUCK & RAIL LOADING STATION RECEIVER IN BPA II	None	Cyclone & Bagfilter	12 tons/hr	N/A
04-086	V-701A-NF	SILO 701A BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-087	V-701B-NF	SILO 701B BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
04-088	V-701C-NF	SILO 701C BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-089	V-701D-NF	SILO 701D BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-090	V-701E-NF	SILO 701E BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-091	V-338-NF	SILO 338 BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-092	V-339-NF	SILO 339 BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-093	V-335-NF	SILO 335 BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-094	V-507A-NF	SILO 507A BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-095	V-507B-NF	SILO 507B BIN VENT IN BPA II	None	Bagfilter	7.5 tons/hr	N/A
04-101	TRLSF	EAST TRUCK AND RAIL LOADING STATION DUST COLLECTOR IN BPA I	None	Bagfilter	12 tons/hr	N/A
04-207	B-5030S	BPA III SPARE BLOWER	None	Bagfilter	12 tons/hr	N/A
04-215	SWTRL	SOUTHWEST TRUCK AND RAIL LOADING STATION DUST COLLECTOR IN BPA III	None	Bagfilter	12 tons/hr	N/A
04-217	K-701A	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K-701A) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A
04-218	K-701B	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K701B) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A
04-219	K-701C	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K-701C) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A
04-220/220A	CLN RCU	CLOSED LOOP NITROGEN RAILCAR UNLOADING	None	Bagfilter	4.5 tons/hr	N/A
04-221A/221B	K-701D	VACUUM BLOWER FOR TRUCK & RAIL UNLOADING (K-701D) IN BPA I, II, & III	None	Bagfilter	7.5 tons/hr	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.3.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour;
and P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
04-026	V-701A BF	7.5	15.8
04-027	V-339-BF	7.5	15.8
04-028	V-338-BF	7.5	15.8
04-029	V-335-BF	7.5	15.8
04-030	V-507B-BF	7.5	15.8
04-031	V-507A-BF	7.5	15.8
04-034	V-701B-BF	7.5	15.8
04-035	V-701C-BF	7.5	15.8
04-039	V-701D-BF	7.5	15.8
04-040	V-701E-BF	7.5	15.8
04-064	V-5050-NF	12	21.7
04-065	V-5060-NF	12	21.7
04-066	F-801D-F	12	21.7
04-069	B-5030 A	12	21.7
04-070	B-5030 B	12	21.7
04-083	RRLSF	12	21.7
04-086	V-701A-NF	7.5	15.8
04-087	V-701B-NF	7.5	15.8
04-088	V-701C-NF	7.5	15.8
04-089	V-701D-NF	7.5	15.8
04-090	V-701E-NF	7.5	15.8
04-091	V-338-NF	7.5	15.8
04-092	V-339-NF	7.5	15.8
04-093	V-335-NF	7.5	15.8
04-094	V-507A-NF	7.5	15.8
04-095	V-507B-NF	7.5	15.8
04-101	TRLSF	12	21.7
04-207	B-5030S	12	21.7
04-214	NTRL	12	21.7
04-215	SWTRL	12	21.7
04-217	K-701A	7.5	15.8
04-218	K-701B	7.5	15.8
04-219	K-701C	7.5	15.8
04-220/220A	CLN RCU	4.5	11.2

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

F.3.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with F.3.1, the bagfilters associated with emission units V-701A-BF, V-339-BF, V-338-BF, V-335-BF, V-507B-BF, V-507A-BF, V-701B-BF, V-701C-BF, V-701D-BF, V-701E-BF, V-5050-NF, V-5060-NF, F-801D-F, B-5030A, B-5030B, RRLSF, V-701A-NF, V-701B-NF, V-701C-NF, V-701D-NF, V-701E-NF, V-338-NF, V-339-NF, V-335-NF, V-507A-NF, V-507B-NF,

TRLSF, B-5030S, NTRL, SWTRL, K-701A, K-701B, K-701C, and CLN RCU shall be in operation at all times that material is being transferred into the facility.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

F.3.3 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust for emission units V-701A-BF, V-339-BF, V-338-BF, V-335-BF, V-507B-BF, V-507A-BF, V-701B-BF, V-701C-BF, V-701D-BF, V-701E-BF, V-5050-NF, V-5060-NF, F-801D-F, B-5030A, B-5030B, RRLSF, V-701A-NF, V-701B-NF, V-701C-NF, V-701D-NF, V-701E-NF, V-338-NF, V-339-NF, V-335-NF, V-507A-NF, V-507B-NF, TRLSF, B-5030S, NTRL, SWTRL, K-701A, K-701B, and K-701C shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from V-701A-BF, V-339-BF, V-338-BF, V-335-BF, V-507B-BF, V-507A-BF, V-701B-BF, V-701C-BF, V-701D-BF, V-701E-BF, V-5050-NF, V-5060-NF, F-801D-F, B-5030A, B-5030B, RRLSF, V-701A-NF, V-701B-NF, V-701C-NF, V-701D-NF, V-701E-NF, V-338-NF, V-339-NF, V-335-NF, V-507A-NF, V-507B-NF, TRLSF, B-5030S, NTRL, SWTRL, K-701A, K-701B, or K-701C, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

F.3.4 Record Keeping Requirements

(a) To document the compliance status with Condition F.3.3, the Permittee shall maintain the weekly record of the visible emission notations required by Condition F.3.3. When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(b) Pursuant to 40 CFR 63.111, the BpaCMPU transfer rack identified as BPA1081TR is a Group 2 transfer rack. Therefore, pursuant to 40 CFR 63.126(c) and 63.130(f), the Permittee shall record and update annually an analysis demonstrating the design and

actual annual throughput of the transfer rack and the weight-percent organic HAPs in the liquid loaded. Examples of acceptable documentation for the weight-percent organic HAPs in the liquid loaded include, but are not limited to, analyses representative of the material and engineering calculations.

(c) All records required to be maintained by Condition F.3.4, shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION F.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: BPA, Buildings 15, 31, 56 and 49

BPA Area Tanks

(h) Tanks located in the BPA Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
04-072	V-1010	MIBK STORAGE TANK IN BPA III	None	None	57.5 m^3	1985
04-102	V-7066	50% GLYCOL STORAGE TANK IN BPA III	None	None	48 m^3	1985
N/A	V-1040	PHENOL STORAGE IN BPA III	None	None	267 m^3	1985
N/A	V-1060	STORAGE TANK IN BPA III	None	None	973 m^3	1985
N/A	V-1070	STORAGE TANK IN BPA III	None	None	130 m^3	1984
N/A	V-1090	STORAGE TANK IN BPA III	None	None	267 m^3	1985
N/A	V-3030	STORAGE TANK IN BPA III	None	None	32 m^3	1985
N/A	V-474	STORAGE TANK IN BPA II	None	None	57.6 m^3	1985

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
04-059	V-7090	HOT OIL STORAGE TANK IN BPA III	None	None	22 m^3	N/A
04-061	V-7091	OIL STORAGE TANK IN BPA III	None	None	3.5 m^3	N/A
04-073	V-1080	ACETONE STORAGE TANK IN BPA III	None	None	487 m^3	N/A
04-080	V-1081	ACETONE EXTRACTION TANK IN BPA III	None	None	17 m^3	N/A
15-006	V-209	VENT TANK V-209 IN BPA PILOT PLANT	C-294 Scrubber	None	3.4 m^3	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.4.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to PC (65) 1472, Condition 2, issued on July 29, 1980, and revised through the Title V permit the tank V-209 located in the BPA pilot plant shall be limited to 10 tons of VOC emissions per 365-day period, rolled on a daily basis. Compliance with this limit renders the requirements of

326 IAC 2-2, Prevention of Significant Deterioration not applicable. In addition, compliance with this Condition and Conditions E.2.1(a), E.3.1, N.2.1, and N.3.1 ensures that the net emission increase from the 1989 expansion project (pursuant to PC (65) 1813, issued on December 21, 1989, as amended in this Title V permit) is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

Compliance Determination Requirements

F.4.2 Volatile Organic Compounds (VOC) Control

Pursuant to PC (65) 1472, Condition 10, issued on July 29, 1980 and revised through the Title V permit, and in order to comply with the VOC limits described in Condition F.4.1, the tank V-209 shall use condensation or a scrubber to control VOC emissions during all periods of operation, except during periods of startup, shutdown, or malfunction.

F.4.3 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

In order to establish an emission factor and demonstrate compliance with Condition F.4.1:

(a) The Permittee shall perform VOC testing for emission unit V-209 using methods as approved by the Commissioner within 180 days after restarting this operation, which is located at the BPA pilot plant. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition. During this test, the Permittee shall measure and record the scrubber liquid feed flow rate and exhaust air stream pressure drop across the scrubber.

(b) The VOC emissions for each day shall be determined by the equation below and daily emissions summed for the rolling 365-day period.

VOC Emissions (ton/day) = (EF_{V209}) x [1 ton/2000 lbs] x [hours of operation/day]

Where:

EF_{V209} = Emission factor of 2.28 lb VOC/hr for V-209 or the emission factor determined in the most recent performance test

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

F.4.4 Monitoring for Scrubbers

(a) The Permittee shall monitor and record the scrubber liquid feed flow rate and exhaust air stream pressure drop across the scrubber at least once every 15 minutes for the scrubber (C-294) controlling VOC emissions from emission unit V-209. This requirement shall not apply during periods when V-209 is not in operation and there are no emissions from V-209. When for any three (3) hour average reading (arithmetic average of three contiguous one-hour periods), the flow rate or pressure drop across the scrubber is outside the range as determined in the stack test required by Condition F.4.3, the Permittee shall take reasonable steps. A flow or pressure drop reading that is outside the normal range is not a deviation from this permit. Failure to take response steps, shall be

considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) The instruments used for determining flow rate and pressure drop shall comply with Section C - Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. Upon restart of V-209, the specifications shall be available on site with the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

F.4.5 Record Keeping and Reporting Requirements

(a) Pursuant to 326 IAC 12, the Permittee shall maintain records of the dimensions and an analysis showing the capacity of storage tanks identified as V-250/260. These records shall be maintained for the life of the source.

(b) Pursuant to 40 CFR 63 Subpart G, Table 5 the BPA CMPU storage vessels identified as V-1060, V-1010, V-7066, V-1040, V-1070, V-1090 are Group 2 storage vessels, therefore, pursuant to 40 CFR 63.119(a) and 63.123(a), the Permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 2 status and is in operation.

(c) To document the compliance status with Condition F.4.4, the Permittee shall maintain records of the scrubber liquid feed flow rate and the exhaust airstream pressure drop across the scrubber which are monitored and recorded for the scrubber controlling emissions from facility V-209.

(d) All records required to be maintained by Condition F.4.5 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(e) The Permittee shall submit the reports and records required to be submitted by Condition F.4.5 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION F.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: BPA, Buildings 15, 31, 56 and 49

BPA Oil Heating Operations

(i) The BPA oil heating operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
04-063	H-7090	BPA III HOT OIL HEATER burns natural gas	None	None	4 MMBtu/hr	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

F.5.1 [Reserved]

F.5.2 [Reserved]

SECTION F.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: BPA, Buildings 15, 31, 56 and 49

BPA Heat Exchange System and Area Wastewater

(j) The BPA heat exchange system located within the BpaCMPU is described as the entire recirculating cooling system which is connected to the cooling towers identified as BPA CTC1, BPA CTC2, and BPA CTC3.

(k) The BPA area wastewater is identified as:

(1) HON maintenance wastewater discarded from the BpaCMPU that contains organic HAP's listed in table 9 of 40 CFR 63, Subpart G.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.6.1 Hazardous Air Pollutants (HAPs) - Heat Exchange System [326 IAC 20] [40 CFR 63, Subpart F]

Pursuant to 40 CFR 63.104(b), the Permittee shall comply with the applicable emission standards and monitoring provisions of 40 CFR 63.104(a) for the BPA Chemical Manufacturing Process Unit (BpaCMPU) heat exchange system by monitoring the BPA cooling tower system, identified as BPA CTC1, BPA CTC2, and BPA CTC3, for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. The table that follows provides the specific applicable monitoring provisions of the HON that apply to this heat exchange system and the specific condition number where descriptions of these provisions can be found in Section AA.

Section AA Permit Condition	Applicable 40 CFR Part 63, Subpart F Requirement	Regulatory Citation Title	BPA CMPU	CTC1	CTC2	CTC3
AA.2(a)	63.104(a)	Heat Exchange System Requirements	X	X	X	X
AA.2(b)	63.104(b)	Heat Exchange System Requirements	X	X	X	X
AA.2(d)	63.104(d)	Heat Exchange System Requirements	X	X	X	X
AA.2(e)	63.104(e)	Heat Exchange System Requirements	X	X	X	X

F.6.2 Alternative Operating Scenario for the BPA Heat Exchange System [326 IAC 20] [40 CFR 63, Subpart F]

Instead of complying with the provisions of Condition F.6.1, the Permittee may elect that the BPA heat exchange system comply with the alternative operating scenario of this condition. If this

alternative is chosen, the Permittee, pursuant to 40 CFR 63.104(c), shall monitor the BPA heat exchange system for leaks using surrogate indicators for the BPA cooling tower system, identified as BPA CTC1, BPA CTC2, and BPA CTC3. The table that follows provides the specific applicable monitoring provisions of the HON that apply to this heat exchange system and the specific condition number where descriptions of these provisions can be found in Section AA.

Section AA Permit Condition	Applicable 40 CFR Part 63, Subpart F Requirement	Regulatory Citation Title
AA.2(a)	63.104(a)	Heat Exchange System Requirements
AA.2(c)	63.104(c)	Heat Exchange System Requirements
AA.2(d)	63.104(d)	Heat Exchange System Requirements
AA.2(e)	63.104(e)	Heat Exchange System Requirements

F.6.3 Hazardous Air Pollutants (HAPs) - Maintenance Wastewater [326 IAC 20] [40 CFR 63, Subpart F]

Pursuant to 40 CFR 63.105(d) which is described in Condition AA.21(d), the Permittee shall implement the maintenance wastewater procedures described in 40 CFR 63.105(b) and (c) for all maintenance wastewater that contains those organic HAP's listed in table 9 of 40 CFR 63, Subpart G as part of the start-up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

F.6.4 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 63, Subpart F and to document the compliance status with Condition F.6.1 or F.6.2, the Permittee shall keep records and submit reports as specified in 40 CFR 63.104(f) [as described in AA.7(f)]. In addition, if the Permittee chooses to comply with the alternative operating scenario in Condition F.6.2 instead of Condition F.6.1, then the Permittee shall also keep records according to 40 CFR 63.104(c) [as described in AA.7(c)].

(b) [Reserved].

(c) Pursuant to 40 CFR 64.105(a) and to document the compliance status with Condition F.6.3, the Permittee shall keep records for the maintenance wastewater as specified in the following federal citations and described in Section AA.

Section E Permit Condition	Applicable 40 CFR Part 63, Subpart F Requirement	Regulatory Citation Title
AA.8(b)	63.105(b)	Maintenance Wastewater Requirements
AA.8(c)	63.105(c)	Maintenance Wastewater Requirements
AA.8(e)	63.105(e)	Maintenance Wastewater Requirements

(d) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it operates under as detailed in Condition F.6.2. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(e) All records required to be maintained by Condition F.6.4 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(f) The Permittee shall submit the reports and records required to be submitted by Condition F.6.4 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION F.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: BPA, Buildings 15, 31, 56 and 49

BPA Leak Detection and Repair (LDAR) Components

(l) The BPA chemical manufacturing process unit (BpaCMPU) consists of equipment subject to LDAR. LDAR applies to the BpaCMPU components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems intended to operate in organic hazardous air pollutant service for 300 hours or more during the calendar year and/or volatile organic compound (HAP/VOC) service for any amount of time during the calendar year. In HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight HAP. In VOC service means that a piece of equipment either contains or contacts a fluid that is at least 10 percent VOC by weight.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.7.1 Equipment Leaks [326 IAC 12] [40 CFR 60, Subpart VV] [326 IAC 20] [40 CFR 63, Subpart H]

(a) Pursuant to 40 CFR 60, Subpart VV, the Permittee shall control leaks of VOC from the BPA plant equipment. Pursuant to 40 CFR 63.160(c), the Permittee has elected to apply 40 CFR 63, Subpart H to all BPA plant equipment subject to Subpart VV. All VOC's in the BPA operations shall be considered, for purposes of applicability and compliance with 40 CFR 63, Subpart H, as if it were organic hazardous air pollutant. Compliance with the provisions of Subpart H listed in Condition F.7.1(b) as detailed in Section CC, shall constitute compliance with 40 CFR part 60, Subpart VV.

(b) Pursuant to 40 CFR 63, Subpart H, the Permittee shall control leaks of HAPs from each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by Subpart H according to the following listed Subpart H requirements which are in Section CC. Any equipment, as defined in Subpart H, that is intended to operate in organic hazardous air pollutant service for less than 300 hours during the calendar year, or is excluded pursuant to 63.160(e) or (f), is exempt from the provisions of 40 CFR 63 Subpart H.

Section E Permit Condition	Applicable 40 CFR Part 63, Subpart H Requirement	Regulatory Citation Title
CC.1	63.162	Standards: General
CC.2	63.163	Standards: Pumps In Light Liquid Service

Section E Permit Condition	Applicable 40 CFR Part 63, Subpart H Requirement	Regulatory Citation Title
CC.3	63.164	Standards: Compressors
CC.4	63.165	Standards: Pressure Relief Devices In Gas/Vapor Service
CC.5	63.166	Standards: Sampling Connection Systems
CC.6	63.167	Standards: Open-Ended Valves or Lines
CC.7	63.168	Standards: Valves In Gas/Vapor Service and In Light Liquid Service
CC.8	63.169	Standards: Pumps, Valves, Connectors, and Agitators In Heavy Liquid Service; Instrumentation Systems,; and Pressure Relief Devices In Liquid Service
CC.9	63.170	Standards: Surge Control Vessels and Bottoms Receivers
CC.10	63.171	Standards: Delay of Repair
CC.11	63.172	Standards: Closed-Vent Systems and Control Devices
CC.12	63.173	Standards: Agitators In Gas/Vapor Service and In Light Liquid Service
CC.13	63.174	Standards: Connectors In Gas/Vapor Service and In Light Liquid Service
CC.14	63.176	Quality Improvement Program For Pumps
CC.15	63.179	Alternative Means of Emission Limitation: Enclosed-Vented Process Units
CC.16	63.180	Test Methods and Procedures

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

F.7.2 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 63.181, Subpart H and to document the compliance status with Condition F.7.1, the Permittee shall keep records and submit reports as specified in the following Subpart H applicable requirements which are described in Section CC.

Section E Permit Condition	Applicable 40 CFR Part 63, Subpart H Requirement	Regulatory Citation Title
CC.15	63.181	Recordkeeping Requirements
CC.16	63.182	Reporting Requirements

(b) All records required to be maintained by Condition F.7.2 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(c) The Permittee shall submit the reports and records required to be submitted by Condition F.7.2 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION F.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: BPA, Buildings 15, 31, 56 and 49

Certain liquid streams in open systems

(m) The BPA chemical manufacturing process unit (BpaCMPU) includes certain liquid streams subject to open system control requirements. These control requirements apply to the BpaCMPU components described as:

(1) A drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flow rate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute; and/or

(2) A tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

F.8.1 Hazardous Air Pollutants (HAPs) [326 IAC 14][326 IAC 20] [40 CFR 63, Subpart F] [40 CFR 63, Subpart G]

(a) Pursuant to 40 CFR 63.149(a), the Permittee shall comply with the control requirements according to 40 CFR 63, Subpart G, Table 35 for any drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flowrate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute, and the drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator is controlled less stringently than in table 35 and is not listed in 40 CFR 63.100(f), and the item of equipment is not otherwise exempt from controls by the provisions of 40 CFR 63, subparts A, F, G, or H.

(b) Pursuant to 40 CFR 63.149(a), the Permittee shall comply with the control requirements according to 40 CFR 63, Subpart G, Table 35 for any tank with a capacity of 38m3 or greater that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute, and the tank is controlled less stringently than in table 35 and is not listed in 40

CFR 63.100(f), and the tank is not otherwise exempt from controls by the provisions of 40 CFR 63, subparts A, F, G, or H.

Compliance Determination Requirements

F.8.2 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subpart G]

Pursuant to 40 CFR 63.149(e)(2), the total annual average concentration and annual average flowrate for liquid streams associated with a tank shall be determined at the inlet to the tank and according to the procedures in 40 CFR 63.144(b) and (c).

Section F consists of the following Sections: F.1, F.2, F.3, F.4, F.5, F.6, F.7, F.8, one (1) Part 70 Quarterly Reporting Form.

Condition F.8.2 concludes the Section F requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section
Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002
Facility: H-6060, Stack/Vent ID 04-050; Condition F.2.1
Parameter: VOC
Limit: 18.0 tons of VOC per 365-day period, rolled on a daily basis

Year: _____ Quarter: _____

Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period	Day	VOC Emission this day (ton/day)	VOC Emissions for the last 365-day period
1			**17**		
2			**18**		
3			**19**		
4			**20**		
5			**21**		
6			**22**		
7			**23**		
8			**24**		
9			**25**		
10			**26**		
11			**27**		
12			**28**		
13			**29**		
14			**30**		
15			**31**		
16			**no. of deviations**		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

SECTION G.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: LEXAN(c) Resin, Buildings 14 and 16

LEXAN# Resin Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the entire affected source or affected facility subject to the applicable regulation.

(a) The LEXAN# Resin Polycarbonate Production Process Unit (LxrPPPU) subject to 40 CFR 63, Subpart YY is identified by its primary product, which is polycarbonate. The LxrPPPU includes any equipment, such as a pump, compressor, agitator, pressure relief device, sampling collection system, open-ended valve or line, valve, connector, and instrumentation system in organic hazardous air pollutant service that is assembled and connected by pipes or ducts to process raw and/or intermediate materials to manufacture polycarbonate by interfacial polymerization from bisphenols and phosgene. The LxrPPPU includes the reactor in which phosgene is formed and all equipment downstream of the reactor that provides phosgene for the production of polycarbonate; this part of the LxrPPPU is identified as PhosF-972 and the specific requirements of process vent F-972 can be found in Section I.1.

(b) MeCL_Eq identifies the part of the LEXAN# Resin Polycarbonate Production Process Unit subject to 40 CFR 63, Subparts H and I (MeCL_Eq) because it produces polycarbonates and emits methylene chloride. The MeCL_Eq includes only equipment that is in methylene chloride service. In methylene chloride service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of methylene chloride. The LxrPPPU includes the MeCL_Eq equipment, but the MeCL_Eq equipment is regulated under 40 CFR 63, Subpart H and I instead of 40 CFR 63, Subpart YY.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.1.1 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]

The table that follows sets forth provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source LxrPPPU.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.12(c)	State Authority and Delegations

Compliance Determination Requirements

G.1.2 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subpart YY]

(a) Pursuant to 40 CFR 63.1104(a), the provisions below set forth calculation and measurement methods for criteria that are required by 40 CFR 63.1103 to be used to determine applicability of control requirements for process vents from continuous unit operations located in the LxrPPPU. The Permittee of a process vent is not required to determine the criteria specified for a process vent that is being controlled in accordance with the applicable weight-percent, TOC concentration, or organic HAP concentration requirement in 40 CFR 63.1103.

Section DD Permit Condition	Applicable 40 CFR Part 63, Subpart YY Requirement	Regulatory Citation Description
DD.4(a)	63.1104(a)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(b)	63.1104(b)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(c)	63.1104(c)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(e)	63.1104(e)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(f)	63.1104(f)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(g)	63.1104(g)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(h)	63.1104(h)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(j)	63.1104(j)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.4(k)	63.1104(k)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods

(b) The Generic Maximum Achievable Control Technology Standards (GMACT) applicability assessment procedures and methods for the LxrPPPU equipment leaks are identified in the following table.

Section DD Permit Condition	Applicable 40 CFR Part 63, Subpart YY Requirement	Regulatory Citation Description
DD.5(a)	63.1107(a)	Equipment Leaks: Applicability Assessment Procedures and Methods
DD.5(b)	63.1107(b)	Equipment Leaks: Applicability Assessment Procedures and Methods
DD.5(c)	63.1107(c)	Equipment Leaks: Applicability Assessment Procedures and Methods
DD.5(d)	63.1107(d)	Equipment Leaks: Applicability Assessment Procedures and Methods

(c) The GMACT general compliance requirements for the LxrPPPU are identified in the following table.

Section DD Permit Condition	Applicable 40 CFR Part 63, Subpart YY Requirement	Regulatory Citation Description
DD.6(a)	63.1108(a)	Compliance With Standards and Operation and Maintenance Requirements
DD.6(b)	63.1108(b)	Compliance With Standards and Operation and Maintenance Requirements

G.1.3 Performance Test and Compliance Assessment Requirements for Control Devices [40 CFR 63, Subpart SS]

The table that follows provides performance testing requirements of the National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process [40 CFR 63, Subpart SS] that apply to PhosF-972.

Section EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS Requirement	Regulatory Citation Description
EE.9(b)	63.990(b)	Absorbers, Condensers, and Carbon Adsorbers used as Control Devices
EE.10(b)	63.994(b)	Halogen Scrubbers and other Halogen Reduction Devices
EE.11(a)	63.997(a)	Performance Test and Compliance Assessment Requirements for Control Devices
EE.11(b)	63.997(b)	Performance Test and Compliance Assessment Requirements for Control Devices
EE.11(c)	63.997(c)	Performance Test and Compliance Assessment Requirements for Control Devices
EE.11(d)	63.997(d)	Performance Test and Compliance Assessment Requirements for Control Devices

Section EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS Requirement	Regulatory Citation Description
EE.11(e)	63.997(e)	Performance Test and Compliance Assessment Requirements for Control Devices

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

G.1.4 Record Keeping and Reporting Requirements

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source LxrPPPU.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.5	Preconstruction review and notification requirements
63.13(a)	Addresses of State air pollution control agencies and EPA Regional Offices
63.13(b)	Addresses of State air pollution control agencies and EPA Regional Offices

(b) The table that follows provides the specific applicable record keeping standards of the National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards (GMACT) [40 CFR 63, Subpart YY] that apply to the LxrPPPU. The provisions of 40 CFR 63.1106 apply to 40 CFR 63, Subpart G requirements set forth below.

Section BB, DD or EE Permit Condition	Applicable 40 CFR Part 63, Subpart G, Subpart SS or Subpart YY Requirement	Regulatory Citation Description
BB.13(f)	63.147(f)	Wastewater Provisions: Reporting and Recordkeeping
EE.12(a)	63.998(a)	Recordkeeping Requirements
DD.7(l)	63.1104(l)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.8(a)	63.1109(a)	Recordkeeping Requirements
DD.8(c)	63.1109(c)	Recordkeeping Requirements
DD.8(d)	63.1109(d)	Recordkeeping Requirements
DD.10(a)	63.1111(a)	Startup, Shutdown, and Malfunction

(c) The table that follows provides the specific applicable reporting standards of the National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards (GMACT) [40 CFR 63, Subpart YY] that apply to the LxrPPPU. The provisions of 40 CFR 63.1106 apply to 40 CFR 63 Subpart G requirements set forth below.

Section BB, DD or EE Permit Condition	Applicable 40 CFR Part 63, Subpart G, Subpart SS or Subpart YY Requirement	Regulatory Citation Description
BB.12(b)	63.146(b)	Wastewater Provisions: Reporting
EE.13(a)	63.999(a)	Notification and Other Reports
EE.13(b)	63.999(b)	Notification and Other Reports
EE.13(c)	63.999(c)	Notification and Other Reports
EE.13(d)	63.999(d)	Notification and Other Reports
DD.7(m)	63.1104(m)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods
DD.9(a)	63.1110(a)	Reporting Requirements
DD.9(c)	63.1110(c)	Reporting Requirements
DD.9(d)	63.1110(d)	Reporting Requirements
DD.9(e)	63.1110(e)	Reporting Requirements
DD.9(f)	63.1110(f)	Reporting Requirements
DD.9(g)	63.1110(g)	Reporting Requirements
DD.10(b)	63.1111(b)	Startup, Shutdown, and Malfunction

(d) All records required to be maintained by Condition G.1.4 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(e) The Permittee shall submit the reports and records required to be submitted by Condition G.1.4 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION G.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: LEXAN# Resin, Buildings 14 and 16

LEXAN# Resin Process Operations

(c) The LEXAN# Resin process operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-007	V-723	RESIN II VENT GAS ABSORBER	None	V-723 is a recovery device	35.82 tons/hour	1991
05-008	F-705	RESIN II V-712 BPA RECEIVER	None	Bagfilter	12.11 tons/hour	1984
05-009	F-706	RESIN II V-713 BPA RECEIVER	None	Bagfilter	12.11 tons/hour	1984
05-013	V-519	RESIN I & II VENT GAS ABSORBER	None	V-519 is a recovery device	35.82 tons/hour	1990
05-016	F-741	RESIN II POST DRYER SURGE HOPPER BIN VENT	None	Bagfilter	30.0 tons/hour	1971

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-004	V-334 BF	TBBPA SILO RECEIVER	None	Bagfilter	7.5 tons/hour	N/A
05-010	F-737	RESIN II WEIGH HOPPER BIN VENT	None	Bagfilter	18.55 tons/hour	N/A
05-011	F-742	RESIN II V-712 BIN VENT	None	Bagfilter	9.28 tons/hour	N/A
05-012	F-743	RESIN II V-713 BIN VENT	None	Bagfilter	9.28 tons/hour	N/A
05-014	F-553	RESIN I BPA RECEIVER FOR V-567	None	Bagfilter	3.76 tons/hour	N/A
05-015	F-515R	RESIN I BPA RECEIVER FOR V-546	None	Bagfilter	3.76 tons/hour	N/A
05-017	V-598	RESIN I V-598 SURGE HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-019	V-508	RESIN I WEIGH HOPPER BIN VENT	None	Bagfilter	7.52 tons/hour	N/A
05-028	F-546	RESIN I V-546 USE BIN VENT	None	Bagfilter	3.76 tons/hour	N/A
05-029	V-567 BF	RESIN I V-567 BPA USE BIN VENT	None	Bagfilter	3.76 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-030	F-7735	RESIN III INTERMEDIATE SURGE HOPPER BIN VENT	None	Bagfilter	30.0 tons/hour	N/A
05-031	F-7733	RESIN III POST DRYER SURGE HOPPER BIN VENT	None	Bagfilter	30.0 tons/hour	N/A
05-041	V-7756A	RESIN IIA AIR STRIP RECEIVER	None	Bagfilter	10.0 tons/hour	N/A
05-042	V-7756B	RESIN IIB AIR STRIP RECEIVER	None	Bagfilter	10.0 tons/hour	N/A
05-043	F-7751A	RESIN II A COLUMN HOPPER BIN VENT	None	Bagfilter	10.0 tons/hour	N/A
05-044	F-7751B	RESIN II B COLUMN HOPPER BIN VENT	None	Bagfilter	10.0 tons/hour	N/A
05-045	F-7751C	RESIN II C COLUMN HOPPER BIN VENT	None	Bagfilter	10.0 tons/hour	N/A
05-046	F-5711	RESIN III D DRYER AIR STRIP RECEIVER	None	Bagfilter	10.0 tons/hour	N/A
05-047	F-5705	RESIN III D COLUMN HOPPER BIN VENT	None	Bagfilter	15.0 tons/hour	N/A
05-048	V-7756C	RESIN II C DRYER AIR STRIP RECEIVER	None	Bagfilter	10.0 tons/hour	N/A
05-050	F-5720 BF	RESIN III BPA RECEIVER	None	Bagfilter	9.05 tons/hour	N/A
05-051	F-5722 BF	RESIN III BPA USE BIN VENT	None	Bagfilter	9.05 tons/hour	N/A
05-052	F-5724 BF	RESIN III BPA WEIGH HOPPER BIN VENT	None	Bagfilter	9.05 tons/hour	N/A
05-053	F-5761A	RESIN I A V-5761A COLUMN HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-054	F-5761B	RESIN I B V-5761B COLUMN HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-055	F-5761C	RESIN I C V-5761C COLUMN HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-056	F-5776	RESIN I SPECIALS DRYER SCRUBBER	None	Peabody Scrubber	7.5 tons/hour	N/A
05-057	F-5778	RESIN I V-5770 SURGE HOPPER BIN VENT	None	Bagfilter	7.5 tons/hour	N/A
05-058	F-5870	RESIN I SURGE HOPPER RHEOMETER FOR F-5870	None	Vac-U-Max Filter	0.05 tons/hour	N/A
05-059	F-5871	RESIN I SURGE HOPPER RHEOMETER FOR F-5871	None	Vac-U-Max Filter	0.05 tons/hour	N/A
05-060	Z-5873	RESIN I FEED SCRUBBER	Scrubber*	N/A	7.5 tons/hour	N/A
05-061	F-506A	DDDA RECEIVER FOR SILO V-506A	None	Bagfilter	7.5 tons/hour	N/A
05-062	F-506	DDDA RECEIVER	None	Bagfilter	7.5 tons/hour	N/A
05-073	F7737	RESIN III POST DRYER FEED RECEIVER FOR V-7731	None	Bagfilter	30.0 tons/hour	N/A
05-074	F-7736	RESIN III POST DRYER FEED RECEIVER FOR V-749	None	Bagfilter	30.0 tons/hour	N/A
05-075	V-506A	DDDA SILO V-506A UNFILTERED VENT	None	N/A	7.5 tons/hour	N/A
05-150	WPDR1	RESIN I PEABODY SCRUBBER	None	Peabody Scrubber	7.5 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
05-151	WPDR2	RESIN II PEABODY SCRUBBER	None	Peabody Scrubber	30.0 tons/hour	N/A
05-152	WPDR3	RESIN III PEABODY SCRUBBER	None	Peabody Scrubber	15.0 tons/hour	N/A
05-154	FDFS	RESIN III FLASH DRYER FAN SCRUBBER	None	Scrubber	15.0 tons/hour	N/A
05-156	F-5728	SUPERSACK UNLOADER UNIT	None	Bagfilter	7.5 tons/hour	N/A
05-157	F-5723	USE BIN FILTER	None	Bagfilter	7.5 tons/hour	N/A
05-158	CLN TRANS	CLN TRANSFER SYSTEM	None	Bagfilter	7.5 tons/hour	N/A
05-159	F-5786	HI HEAT SURGE BIN SYSTEM	None	Bagfilter	7.5 tons/hour	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* There are no control requirements required for the scrubber associated with stack/vent ID 05-060 because uncontrolled emissions/hour are only about 40 percent of the allowable emissions for this emission unit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit:

(a) Emission units V-723 and V-519 are limited as shown in the table below or by the rate determined in the most recent stack test such that the total VOC emissions from V-723 and V-519, and from the COS stream which is described in both Section I.2 and Section K.2 of this permit shall not exceed 55.0 tons per year and the emissions from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the emission units included in Sections G.3, H.2, I.1, I.2, I.3, and J.1) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the resin vent gas absorbers identified as V-723 and V-519, the COS stream, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

Emission Unit	Stack/Vent ID	VOC limit (lb VOC/lb Resin)
V-723	05-007	2.71E-05
V-519	05-013	4.55E-05

(b) Any change or modification which increases the total VOC emissions from emission units F-705, F-706, F-737, F-742, F-743, F-515R, F-741, V-598, V-508, F-546, F-7735, F-7733, V-7756A, V-7756B, F-7751A, F-7751B, F-7751C, F-5711, F-5705, V-7756C, F-5720 BF, F-5722 BF, F-5724 BF, F-5761A, F-5761B, F-5761C, F-5776, F-5778, Z-5873, WPDR1, WPDR2, WPDR3, and from the emission units included in Conditions G.3.1, H.2.1, I.1.1, I.3.1 and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.3.1, H.2.1, I.1.1, I.2.1, I.3.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

G.2.2 Alternative Operating Scenario for V-723 and V-519 to comply with GMACT [326 IAC 20] [40 CFR 63, Subpart SS] [40 CFR 63, Subpart YY]

Pursuant to 40 CFR 63.1104(j), the LxrPPPU process vents, V-723 and V-519 have a TRE index value greater than 4.0; therefore, there are no applicable requirements (or standards) specified in Table 5 of 40 CFR 63.1103(d) for these vents. However, instead of maintaining a TRE index value greater than 4.0 for process vents V-723 and V-519, the Permittee may elect to comply with the alternative operating scenario described in this condition. If this alternative is chosen and the TRE index value for the process vents V-723 and V-519 changes to a value between 2.7 and 4.0, then pursuant to Table 5 of 40 CFR 63.1103(d) the Permittee shall comply with the applicable monitoring and recordkeeping provisions of the National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process [40 CFR 63, Subpart SS]. The process vents, V-723 and V-519, each use an absorber as a recovery device and pursuant to 40 CFR 63.1104(n), shall comply with the monitoring requirements of 40 CFR 63.993(c). The specific applicable control and monitoring requirements in 40 CFR 63, Subparts SS and YY are listed in the table below. This table also provides the specific condition number where descriptions of these provisions can be found in Sections DD and EE.

Section DD or EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS or Subpart YY Requirement	Regulatory Citation Description	V-723	V-519
DD.2(d)	63.1103(d)	Source Category-Specific Applicability, Definitions, and Requirements	X	X
DD.4(n)	63.1104(n)	Process Vents From Continuous Unit Operations: Applicability Assessment Procedures and Methods	X	X
EE.1(e)	63.982(e)	Requirements	X	X
EE.6(a)	63.993(a)	Absorbers, Condensers, Carbon Adsorbers And Other Recovery Devices Used As Final Recovery Devices	X	X
EE.6(c)	63.993(c)	Absorbers, Condensers, Carbon Adsorbers And Other Recovery Devices Used As Final Recovery Devices	X	X

Section DD or EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS or Subpart YY Requirement	Regulatory Citation Description	V-723	V-519
EE.8(b)	63.996(b)	General Monitoring Requirements For Control And Recovery Devices	X	X
EE.8(c)	63.996(c)	General Monitoring Requirements For Control And Recovery Devices	X	X

G.2.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the following emission units shall not exceed the calculated rates given in pounds per hour when operating at the maximum process weight rate shown in the table below. The current maximum process weight rate shown is not a limitation. The pounds per hour limitations were calculated using the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
05-008	F-705	12.11	21.8
05-009	F-706	12.11	21.8
05-016	F-741	30.00	40.0
05-004	V-334 BF	7.50	15.8
05-010	F-737	18.55	29.0
05-011	F-742	9.28	18.2
05-012	F-743	9.28	18.2
05-014	F-553	3.76	9.96
05-015	F-515R	3.76	9.96
05-017	V-598	7.50	15.8
05-019	V-508	7.52	15.8
05-028	F-546	3.76	9.96
05-029	V-567 BF	3.76	9.96
05-030	F-7735	30.00	40.0

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
05-031	F-7733	30.00	40.0
05-041	V-7756A	10.00	19.2
05-042	V-7756B	10.00	19.2
05-043	F-7751A	10.00	19.2
05-044	F-7751B	10.00	19.2
05-045	F-7751C	10.00	19.2
05-046	F-5711	10.00	19.2
05-047	F-5705	15.00	25.2
05-048	V-7756C	10.00	19.2
05-050	F-5720 BF	9.05	17.9
05-051	F-5722 BF	9.05	17.9
05-052	F-5724 BF	9.05	17.9
05-053	F-5761A	7.50	15.8
05-054	F-5761B	7.50	15.8
05-055	F-5761C	7.50	15.8
05-056	F-5776	7.50	15.8
05-057	F-5778	7.50	15.8
05-060	Z-5873	7.50	15.8
05-061	F-506A	7.50	15.8
05-062	F-506	7.50	15.8
05-073	F7737	30.00	40.0
05-074	F-7736	30.00	40.0
05-075	V-506A	7.50	15.8
05-150	WPDR1	7.50	15.8
05-151	WPDR2	30.00	40.0
05-152	WPDR3	15.00	25.2
05-154	FDFS	15.00	25.2
05-156	F-5728	7.5	15.8
05-157	F-5723	7.5	15.8
05-158	CLN TRANS	7.5	15.8
05-159	F-5786	7.5	15.8

(b) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from emission units F-5870 and F-5871 shall not exceed 0.551 pound per hour because the process weight rate is less than one hundred (100) pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

G.2.4 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with G.2.3, the filters on emission units F-705, F-706, F-741, V-334 BF, F-737, F-742, F-743, F-553, F-515R, V-598, V-508, F-546, V-567 BF, F-7735, F-7733, V-7756A, V-7756B, F-7751A, F-7751B, F-7751C, F-5711, F-5705, V-7756C, F-5720 BF, F-5722 BF, F-5724 BF, F-5761A, F-5761B, F-5761C, F-5778, F-5870, F-5871, F-506A, F-506, F7737, F-7736, F-5728, F-5723, CLN TRANS, and F-5786 shall be in operation at all times that material is being transferred into the facility.

G.2.5 VOC Emissions and Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with the VOC limit in Condition G.2.1(a), the VOC emissions for each day shall be determined by the equation below and daily emissions summed for the rolling 365-day period.

$$\text{VOC Emissions} \equiv \left[\frac{1\text{ ton}}{2000\text{ lbs}}\right] \times \left[\left(X_R \times \left(EF_{V723}\right)\right) + \left(Y_R \times \left(EF_{V519}\right)\right)\right]$$

Where:

X_R = Amount of Resin produced, in Pounds per day, in operations associated with the V-723 gas absorber operation; and

Y_R = Amount of Resin produced, in Pounds per day, in operations associated with the V-519 gas absorber operation; and

EF_{V723} = Emission factor of 2.71E-05 lb VOC/lb Resin for V-723 or the emission factor determined in the most recent performance test; and

EF_{V519} = Emission factor of 4.55E-05 lb VOC/lb Resin for V-519 or the emission factor determined in the most recent performance test.

(b) Not later than December 11, 2007, and in order to demonstrate compliance with Condition G.2.1, the Permittee shall conduct a performance test to verify the VOC emission factors for emission units V-723 and V-519 using methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

G.2.6 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust for emission units F-705, F-706, F-741, V-334 BF, F-737, F-742, F-743, F-515R, V-598, V-508, F-546, F-7735, F-7733, V-7756A, V-7756B, F-7751A, F-7751B, F-7751C, F-5711, F-5705, V-7756C, F-5720 BF, F-5722 BF, F-5724 BF, F-5761A, F-5761B, F-5761C, F-5776, F-5778, F-506A, F-506, F7737, F-7736, V-506A, WPDR1, WPDR2, WPDR3, FDFS, F-5728, F-5723, CLN TRANS, and F-5786 shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from the filter associated with F-705, F-706, F-741, V-334 BF, F-737, F-742, F-743, F-515R, V-598, V-508, F-546, F-7735, F-7733, V-7756A, V-7756B, F-7751A, F-7751B, F-7751C, F-5711, F-5705, V-7756C, F-5720 BF, F-5722 BF, F-5724 BF, F-5761A, F-5761B, F-5761C, F-5776, F-5778, F-506A, F-506, F7737, F-7736, V-506A, WPDR1, WPDR2, WPDR3, FDFS, F-5728, F-5723, CLN TRANS, and F-5786, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

G.2.7 Record Keeping Requirements

(a) To document the compliance status with Condition G.2.1, the Permittee shall maintain records of the weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project).

(b) Pursuant to 40 CFR 63.1104(l)(1) [DD.4(l)(1)], the Permittee shall maintain records of measurements, engineering assessments, and calculations used to determine the TRE index value of the process vents V-519 and V-723 according to the procedures in 40 CFR 63.1104(j), including those records associated with halogen vent stream determination. The documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments, as specified in 40 CFR 63.1104(k).

(c) In order to document the compliance status with the alternative operating scenario in Condition G.2.2, and pursuant to 40 CFR 63, Subpart SS, the Permittee shall keep records as specified in the following applicable requirements in 40 CFR 63, Subpart SS which are described in Section EE.

Section EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS Requirement	Regulatory Citation Description	V-723	V-519
EE.12(a)	63.998(a)	Recordkeeping Requirements	X	X
EE.12(b)	63.998(b)	Recordkeeping Requirements	X	X
EE.12(c)	63.998(c)	Recordkeeping Requirements	X	X
EE.12(d)	63.998(d)	Recordkeeping Requirements	X	X

(d) To document the compliance status with Condition G.2.6, the Permittee shall maintain the weekly record of the visible emission notations required by Condition G.2.6(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(e) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if the Permittee operates under the alternative operating scenario as detailed in Condition G.2.2, the Permittee shall keep a record stating this. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(f) All records required to be maintained by Condition G.2.7 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

G.2.8 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with Condition G.2.1(a) shall be submitted using the reporting forms located at the end of this permit, or the equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition. [The reporting form for this requirement is located at the end of Section K of this permit]

(b) In order to document the compliance status with the alternative operating scenario in Condition G.2.2, and pursuant to 40 CFR 63, Subpart SS, the Permittee shall submit reports as specified in 40 CFR 63.999(c) [described in EE.13(c)].

(c) The Permittee shall submit the reports and records required to be submitted by Condition G.2.8 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION G.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: LEXAN# Resin, Buildings 14 and 16

LEXAN# Resin Area Tanks

(d) Tanks located in the LEXAN # Resin Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum tank volume capacity, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
05-005	V-706	V-706 STORAGE TANK WITH SCRUBBER*	None	None	22.7 m^3	1970
N/A	V-5502	SOLUTION BLENDING TANK	None	None	75.7 m^3	N/A
N/A	V-5503	FRESH METHYLENE CHLORIDE STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-5504	RECYCLE METHYLENE CHLORIDE STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-5510	SOLUTION BLENDING STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-711A	RECYCLE SOLVENT STORAGE TANK	None	None	75.7 m^3	N/A
N/A	V-711B	RECYCLE SOLVENT STORAGE TANK	None	None	75.7 m^3	N/A

Insignificant Activities[(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
05-040	V-5509	TEA STORAGE TANK WITH VENT SCRUBBER*	None	None	22.9 m^3	N/A
05-049	V-5780	PTC TANK	None	None	34.1 m^3	N/A
05-071	V-5506	PCP STORAGE TANK WITH VENT SCRUBBER*	None	None	69.7 m^3	N/A
05-072	V5508	DAC TANK WITH VENT SCRUBBER*	None	None	69.8 m^3	N/A
05-155	V-5784	RESORCINOL TANK V-5784 WITH VENT SCRUBBER*	None	None	88.9 m^3	N/A
05-160	F-5787	HIGH HEAT MIXING TANK	None	None	22.3 m^3	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Scrubber not required by any air regulation requirements.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.3.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission unit V-706, and from the emission units included in Conditions G.2.1(b), H.2.1, I.1.1, I.3.1 and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this and Conditions G.2.1, H.2.1, I.1.1, I.2.1, I.3.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

G.3.2 Hazardous Air Pollutants (HAPs) [326 IAC 20] [40 CFR 63, Subpart SS] [40 CFR 63, Subpart YY]

The table that follows provides the specific applicable control and monitoring requirements of the GMACT that apply to V-5502, V-5503, V-5504, V-5510, V-711A, and V-711B. The table also provides the specific condition number where descriptions of these provisions can be found in Sections DD and EE.

(a) Pursuant to 40 CFR 63.1100(g)(1), the Permittee shall comply with the National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards (GMACT) [40 CFR 63, Subpart YY] by meeting the applicable emission standards and monitoring provisions of 40 CFR 63.1103(d) for the LEXAN# Resin Polycarbonate Production Process Unit (LxrPPPU) storage vessels, V-5502, V-5503, V-5504, V-5510, V-711A, and V-711B.

(b) Pursuant to 40 CFR 63.1103(d) Table 5, the Permittee shall reduce emissions of total organic HAP by 95 weight-percent for the storage vessels, V-5502, V-5503, V-5504, V-5510, V-711A, and V-711B by venting emissions through a closed vent system to any combination of control devices meeting the requirements of the National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process [40 CFR 63, Subpart SS].

(c) Pursuant to 40 CFR 63.982(a), the Permittee has elected to route these storage vessels, V-5502, V-5503, V-5504, V-5510, V-711A, and V-711B to a process, therefore, the Permittee shall comply with 40 CFR 63.982(d).

Section DD or EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS or Subpart YY Requirement	Regulatory Citation Description	V-5502	V-5503	V-5504	V-5510	V-711A	V-711B
DD.2(d)	63.1103(d)	Source Category-Specific Applicability, Definitions, and Requirements	X	X	X	X	X	X
EE.1(a)	63.982(a)	Requirements	X	X	X	X	X	X
EE.1(d)	63.982(d)	Requirements	X	X	X	X	X	X

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Section DD or EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS or Subpart YY Requirement	Regulatory Citation Description	V-5502	V-5503	V-5504	V-5510	V-711A	V-711B
EE.3(a)	63.984(a)	Fuel Gas Systems And Processes To Which Storage Vessel, Transfer Rack, Or Equipment Leak Regulated Material Emissions Are Routed	X	X	X	X	X	X
EE.3(b)	63.984(b)	Fuel Gas Systems And Processes To Which Storage Vessel, Transfer Rack, Or Equipment Leak Regulated Material Emissions Are Routed	X	X	X	X	X	X

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

G.3.3 Record Keeping Requirements

(a) Pursuant to 40 CFR 63, Subpart SS and to document the compliance status with Condition G.3.2, the Permittee shall maintain records as specified in 40 CFR 63.998(d) [described in EE.12(d)] for the closed vent system used in routing the storage vessels identified as V-5502, V-5503, V-5504, V-5510, V-711A, and V-711B to a process.

(b) All records required to be maintained by Condition G.3.3 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION G.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: LEXAN# Resin, Buildings 14 and 16

LEXAN # Resin Waste

(e) The LEXAN # Resin area waste is identified below as:

(1) The process wastewater streams discarded from the LxrPPPU:

(A) Contain a total annual average concentration of organic HAP's listed in table 9 of 40 CFR 63, Subpart G less than 10,000 parts per million by weight at any flow rate; or

(B) Contain a total annual average concentration of organic HAP's listed in table 9 of 40 CFR 63, Subpart G less than 1,000 parts per million by weight at an annual average flow rate greater than or equal to 10 liters per minute; and

(2) GMACT Maintenance Wastewater discarded from the LxrPPPU and contains organic HAP's listed in table 9 of 40 CFR 63, Subpart G. Some of the GMACT Maintenance Wastewater is associated with the Phosgene production unit located in Building 6 which is considered part of the polycarbonate production process unit identified as LxrPPPU.

P&ID No.	Wastewater Stream ID[(a)]	Wastewater Stream Unit Description
5-F-12G	2"-DR-A-512E-007	TEA Storage Tank Vent Scrubber F-5509 Drain
5-F-28A	4"-WNB-Yd-528A-63	Resin I Non-Brine Discharge to WWTP
5-F-28A	4"-P	Analyzer Sample Point for Resin I Non-Brine Discharge to WWTP
5-F-28A	½"-WNB-P-528A-68	Sample Point for Resin I Non-Brine Discharge to WWTP (Hot Sample)
5-F-28A	½"-WNB-Qt-528A-69	Sample Point for Resin I Non-Brine Discharge to WWTP (Cooled Sample)
5-F-28C	½"-BRP-Qt-528C-69	Brine Sample Point
5-F-28C	½"-BRP-Qt-528C-70	Brine Sample Point
5-F-28D	6"-BRP-D-528D-04	Brine to Brine Recovery Plant
5-F-50B	1"-DR-P-550B-70	S.D. Powder Scrubber F-5776 Vent Humidifier
5-F-50B	1 ½"-PV-P-550B-77	S.D. Powder Scrubber F-5776 Water Seal Drain
5-F-50B	3"-MWR-P-550B-19	S.D Powder Scrubber F-5776 Level Control Drain
5-F-101A	½"-NAOH-Qt-5101A-024	Caustic Sample Loop Off of RI Primary Caustic Scrubber V-5532 and V-5533
7-F-26	1"-WDI-P-726-43	Post Dryer Powder Scrubber F-733 Level Control Drain
7-F-101A	½"-NAOH-P-7101A-027	Caustic Sample Loop Off of RII Primary Caustic Scrubber V-7721 and V-7722
7-F-116A	6"-WNB-P-7116A-34	RII Non Brine Discharge to WWTP
7-F-116A	½"-WNB-P-7116A-60	Conductivity Sample Point for Resin II Non-Brine Discharge to WWTP
7-F-116A	4"-P	Analyzer Sample Point for Resin II Non-Brine Discharge to WWTP
7-F-116A	½"-WNB-P-7116A-60	Sample Point for Resin II Non-Brine Discharge to WWTP
7-F-142	1 ½"-MWS-P-7142-58	Post Dryer Powder Scrubber F-7734 Level Control Drain
7-F-162	1 ½"-WNB-P-7162-16-HW	Flash Dryer Powder Scrubber F-7806B Level Control Drain
5-F-26	1"-WDI-P-526-65	Post Dryer Powder Scrubber F-590 Level Control Drain
900-F-73C	1"-MWS-A-73C-028	Neutralizer Tank V-951 (Aqueous Phase)
N/A	N/A	GMACT MAINTENANCE WASTEWATER

(a) Each wastewater stream is identified with an affiliated P&ID number and wastewater stream unit description.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.4.1 Hazardous Air Pollutants (HAPs) - Maintenance Wastewater [326 IAC 20] [40 CFR 63, Subpart G] [40 CFR 63, Subpart YY]

Pursuant to 63.1106(b) [described in DD.3(b)], the Permittee shall comply with the GMACT maintenance wastewater requirements in 40 CFR 63.105. Pursuant to 40 CFR 63.105(d) [described in Condition AA.21(d)], the Permittee shall implement the maintenance wastewater procedures described in 40 CFR 63.105(b) and (c) for all maintenance wastewater that contains those organic HAP's listed in table 9 of 40 CFR 63, Subpart G as part of the start-up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

G.4.2 Record Keeping and Reporting Requirements [326 IAC 20] [40 CFR 63, Subpart G] [40 CFR 63, Subpart YY]

(a) Pursuant to 40 CFR 63, Subpart YY, the Permittee shall comply with the HON process wastewater requirements in 40 CFR 63.132 through 63.148, Subpart G except as otherwise specified in 40 CFR 63.1106. Accordingly, pursuant to 40 CFR 63.132(c), the following LxrPPPU process wastewater streams are Group 2; therefore, pursuant to 40 CFR 63.132(a)(3), the Permittee shall only comply with the applicable recordkeeping requirements specified in 63.146(b)(1) and 63.147(b)(8) for these process wastewater streams. The Permittee shall also maintain documentation pursuant to 63.147(f).

P&ID No.	Wastewater Stream ID
5-F-12G	2"-DR-A-512E-007
5-F-28A	4"-WNB-Yd-528A-63
5-F-28A	4"-P
5-F-28A	½"-WNB-P-528A-68
5-F-28A	½"-WNB-Qt-528A-69
5-F-28C	½"-BRP-Qt-528C-69
5-F-28C	½"-BRP-Qt-528C-70
5-F-28D	6"-BRP-D-528D-04
5-F-50B	1"-DR-P-550B-70
5-F-50B	1 ½"-PV-P-550B-77
5-F-50B	3"-MWR-P-550B-19
5-F-101A	½"-NAOH-Qt-5101A-024
7-F-26	1"-WDI-P-726-43
7-F-101A	½"-NAOH-P-7101A-027
7-F-116A	6"-WNB-P-7116A-34
7-F-116A	½"-WNB-P-7116A-60
7-F-116A	4"-P
7-F-116A	½"-WNB-P-7116A-60
7-F-142	1 ½"-MWS-P-7142-58
7-F-162	1 ½"-WNB-P-7162-16-HW
5-F-26	1"-WDI-P-526-65
900-F-73C	1"-MWS-A-73C-028

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

(b) Pursuant to 40 CFR 64.105(a) and to document compliance with Condition G.4.1, the Permittee shall keep records for the maintenance wastewater as specified in the following federal citations as described in Section AA.

Section AA Permit Condition	Applicable 40 CFR Part 63, Subpart F Requirement	Regulatory Citation Title
AA.8(b)	63.105(b)	Maintenance Wastewater Requirements
AA.8(c)	63.105(c)	Maintenance Wastewater Requirements
AA.8(e)	63.105(e)	Maintenance Wastewater Requirement

(c) All records required to be maintained by Condition G.4.2 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(d) The Permittee shall submit the reports and records required to be submitted by Condition G.4.2 to the address listed in Section C - General Reporting Requirements, of this permit.

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

SECTION G.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: LEXAN# Resin, Buildings 14 and 16

LEXAN# Resin Leak Detection and Repair (LDAR) Components

(f) The LEXAN # Resin Polycarbonate Production Process Unit (LxrPPPU) consists of equipment subject to LDAR. LDAR applies to:

(1) The collection of all LxrPPPU components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, and instrumentation systems intended to operate in organic hazardous air pollutant service for 300 hours or more during the calendar year. In organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight HAP. Some of this equipment is routed through a closed vent system, identified as LxrCVS1 and into an emergency vent scrubber, identified as LxrEVS or through a closed vent system, identified as PhosCVS1 and into an emergency vent scrubber, identified as PhosC-964.

(2) The collection of all MeCL_Eq components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems that are in methylene chloride service. In methylene chloride service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of methylene chloride. For clarification purposes, MeCL_Eq components are part of the LxrPPPU, but are regulated under 40 CFR 63, Subpart H and I instead of 40 CFR 63, Subpart YY.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.5.1 Equipment Leaks [326 IAC 20] [40 CFR 63, Subpart H and I] [40 CFR 63, Subpart SS] [40 CFR 63, Subpart TT] [40 CFR 63, Subpart YY]

(a) Pursuant to 40 CFR 63.190(b) and 63.190(e), the provisions of 40 CFR 63, Subparts H and I apply to the MeCL_Eq. The Permittee shall control leaks of methylene chloride from each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system that is associated with the MeCL_Eq according to the following 40 CFR 63, Subpart H applicable requirements as described in Section CC. Pursuant to 63.190(d), any components located in the MeCL_Eq, that are intended to operate in methylene chloride service for less than 300 hours during the calendar year are exempt from the provisions of 40 CFR 63 Subpart H and I. The MeCL_Eq is also subject to 40 CFR 63, Subpart YY, however, pursuant to 40 CFR 63.1100(g)(4)(ii), the Permittee has elected to comply with 40 CFR 63, Subparts H and I for all equipment located within in the MeCL_Eq.

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Section CC Permit Condition	Applicable 40 CFR Part 63, Subpart H Requirement	Regulatory Citation Title
CC.1	63.162	Standards: General
CC.2	63.163	Standards: Pumps In Light Liquid Service
CC.3	63.164	Standards: Compressors
CC.4	63.165	Standards: Pressure Relief Devices In Gas/Vapor Service
CC.5	63.166	Standards: Sampling Connection Systems
CC.6	63.167	Standards: Open-Ended Valves or Lines
CC.7	63.168	Standards: Valves In Gas/Vapor Service and In Light Liquid Service
CC.8	63.169	Standards: Pumps, Valves, Connectors, and Agitators In Heavy Liquid Service; Instrumentation Systems,; and Pressure Relief Devices In Liquid Service
CC.9	63.170	Standards: Surge Control Vessels and Bottoms Receivers
CC.10	63.171	Standards: Delay of Repair
CC.11	63.172	Standards: Closed-Vent Systems and Control Devices
CC.12	63.173	Standards: Agitators In Gas/Vapor Service and In Light Liquid Service
CC.13	63.174	Standards: Connectors In Gas/Vapor Service and In Light Liquid Service
CC.14	63.176	Quality Improvement Program For Pumps
CC.15	63.179	Alternative Means of Emission Limitation: Enclosed-Vented Process Units
CC.16	63.180	Test Methods and Procedures

(b) Pursuant to 40 CFR 63.1103(d), the Permittee has elected to comply with 40 CFR 63, Subpart TT for all LxrPPPU equipment that is subject to 40 CFR 63, Subpart YY but not subject to 40 CFR 63, Subpart H and I.

(1) The Permittee shall control leaks of HAPs from each pump, compressor, agitator, pressure relief device, sampling connection system, open ended valve or line, valve, and connector in organic hazardous air pollutant service according to the following listed provisions of 40 CFR 63, Subpart TT as described in Section JJ. Any equipment, as defined in Subpart YY, that operates in organic hazardous air pollutant service for 300 hours or less during the calendar year is exempt from the provisions of 40 CFR 63 Subpart YY.

Section JJ Permit Condition	Applicable 40 CFR Part 63, Subpart TT Requirement	Regulatory Citation Title
JJ.1	63.1002	Compliance Assessment
JJ.2	63.1003	Equipment Identification
JJ.3	63.1004	Instrument And Sensory Monitoring For Leaks
JJ.4	63.1005	Leak Repair
JJ.5	63.1006	Valves In Gas And Vapor Service And In Light Liquid Service Standards
JJ.6	63.1007	Pumps In Light Liquid Service Standards
JJ.7	63.1008	Connectors In Gas And Vapor Service And In Light Liquid Service Standards
JJ.8	63.1009	Agitators In Gas And Vapor Service And In Light Liquid Service Standards
JJ.9	63.1010	Pumps, Valves, Connectors, And Agitators In Heavy Liquid Service; Pressure Relief Devices In Liquid Service; And Instrumentation Systems Standards
JJ.10	63.1011	Pressure Relief Devices In Gas And Vapor Service Standards
JJ.11	63.1012	Compressor Standards
JJ.12	63.1013	Sampling Connection Systems Standards
JJ.13	63.1014	Open-Ended Valves Or Lines Standards

(2) Pursuant to 40 CFR 63.1016, the Permittee has elected to enclose some of the equipment within the LxrPPPU in such a manner that all emissions from these particular equipment leaks are vented through one of two closed vent systems, identified as LxrCVS1 and PhosCVS1, and into one of two emergency vent scrubbers, identified as LxrEVS and PhosC-964. The Permittee shall comply with the following provisions of 40 CFR 63, Subpart SS and Subpart TT as described in Sections EE and JJ.

Section EE and JJ Permit Condition	Applicable 40 CFR Part 63, Subpart SS or Subpart TT Requirement	Regulatory Citation Title
JJ.1	63.1002	Compliance Assessment
JJ.2	63.1003	Equipment Identification
JJ.14	63.1015	Closed Vent Systems And Control Devices; Or Emissions Routed To A Fuel Gas System Or Process
JJ.15	63.1016	Alternative Means Of Emission Limitation: Enclosed-Vented Process Units
EE.1(a)	63.982(a)	Requirements

EE.1(c)	63.982(c)	Requirements
EE.2	63.983	Closed Vent Systems
EE.4	63.986	Nonflare Control Devices Used For Equipment Leaks Only

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

G.5.2 Record Keeping and Reporting Requirements

(a) To document the compliance status with Condition G.5.1(a), the Permittee shall keep records and submit reports for the MeCL_Eq as specified in the following provisions of 40 CFR 63, Subpart H and Subpart I which are described in Section CC and MM.

Section CC Permit Condition	Applicable 40 CFR Part 63, Subparts H or I Requirement	Regulatory Citation Title
CC.15	63.181	Recordkeeping Requirements
CC.16	63.182	Reporting Requirements
MM.1(f)	63.192(f)	Standard
MM.1(g)	63.192(g)	Standard

(b) To document the compliance status with Condition G.5.1(b)(1), the Permittee shall keep records and submit reports for the applicable equipment in the LxrPPPU as specified in the following provisions of 40 CFR 63, Subpart TT which are described in Section JJ.

Section JJ Permit Condition	Applicable 40 CFR Part 63, Subpart TT Requirement	Regulatory Citation Title
JJ.16	63.1017	Recordkeeping Requirements
JJ.17	63.1018	Reporting Requirements

(c) To document the compliance status with Condition G.5.1(b)(2), the Permittee shall keep records and submit reports for the applicable equipment in the LxrPPPU as specified in the following provisions of 40 CFR 63, Subpart TT which are described in Section EE and JJ.

Section EE and JJ Permit Condition	Applicable 40 CFR Part 63, Subpart TT Requirement	Regulatory Citation Title
JJ.15	63.1016	Alternative Means Of Emission Limitation: Enclosed-Vented Process Units
JJ.16	63.1017	Recordkeeping Requirements
JJ.17	63.1018	Reporting Requirements

EE.12(d)(4)	63.998(d)(4)	Recordkeeping Requirements
EE.13(c)	63.999(c)	Notifications And Other Reports

(d) All records required to be maintained by Condition G.5.3 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(e) The Permittee shall submit the reports and records required to be submitted by Condition G.5.3 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION G.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: LEXAN# Resin Area; Buildings 14 and 16

Certain liquid streams in open systems

(g) The LEXAN # Resin Polycarbonate Production Process Unit (LxrPPPU) includes certain liquid streams subject to open system control requirements. These control requirements apply to the LEXAN # Resin PPPU components described as:

(1) A drain, drain hub, manhole (including sumps and other points of access to a conveyance system), lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flow rate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute; and/or

(2) A tank with capacity equal to or greater than 38 cubic meters that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flowrate greater than or equal to 10 liters per minute.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.6.1 Hazardous Air Pollutants (HAPs)[326 IAC 20] [40 CFR 63, Subpart F] [40 CFR 63, Subpart G] [40 CFR 63, Subpart YY]

(a) Pursuant to 63.1106(c) [described in DD.3(c)], the Permittee shall comply with the provisions of Table 35 of 40 CFR 63, Subpart G for any drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at any flow rate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute and the drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator is controlled less stringently than in table 35 and is not listed in 40 CFR 63.100(f), and the item of equipment is not otherwise exempt from controls by the provisions of 40 CFR 63, Subparts A, F, G, H, or YY.

(b) Pursuant to 40 CFR 63.1106(c), the Permittee shall comply with the control requirements according to Table 35 of 40 CFR 63, Subpart G for any tank with capacity equal to or greater than 38 cubic meters that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of 40 CFR 63, Subpart G, Table 9 compounds at an annual average flow rate greater than or equal to 10 liters per minute and the tank is controlled less stringently than in table 35

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

and is not listed in 40 CFR 63.100(f), and the tank is not otherwise exempt from controls by the provisions of 40 CFR 63, Subparts A, F, G, H, or YY.

(c) Pursuant to 40 CFR 63.1106(c)(5), when terms used in Table 35 of 40 CFR 63, Subpart G are defined in 40 CFR 63.1101, the definition in 63.1101 shall apply. For terms used in Table 35 of 40 CFR 63, Subpart G that are not defined in 40 CFR 63.1101, the definitions of 40 CFR 63.101 and 63.111 shall apply.

(d) Pursuant to 40 CFR 63.1106(c)(6), when Table 35 of 40 CFR 63, Subpart G refers to 40 CFR 63.119(e)(1) or (e)(2) in the requirements for tanks, the requirements in 40 CFR 63.982(a)(1) shall apply.

Compliance Determination Requirements

G.6.2 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subpart G]

Pursuant to 40 CFR 63.149(e)(2), the total annual average concentration and annual average flow rate for liquid streams associated with a tank shall be determined at the inlet to the tank and according to the procedures in 40 CFR 63.144(b) and (c).

Section G consists of the following Sections: G.1, G.2, G.3, G.4, G.5, and G.6.

Condition G.6.2 concludes the Section G requirements of this permit

SECTION H.1 [RESERVED]

SECTION H.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Brine Recovery, Building 32

Brine Recovery Operations

(b) The Brine Recovery operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
06-008	V-70-4C	HCL SYNTHESIS SCRUBBER TOWER VENT (V70-10)*	None	None	N/A	N/A

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
06-006	V70-2	HCL TANK TRUCK TRANSFER AND STORAGE VENT SCRUBBER (V70-2)*	None	None	N/A	N/A
06-010	V20-5	BRINE SURGE TANK (V20-5)	None	None	N/A	N/A
06-011	ACID SUMP	ACID SUMP	None	None	N/A	N/A
06-012	V20-7	ACID BRINE STRIPPER (V20-7)	None	None	N/A	N/A
06-035	V-53-1	ENCLOSURE VENTILATION SCRUBBER (EVS) (V53-1)**	None	None	N/A	N/A
06-055	V20-21	RAW BRINE STORAGE TANK (V20-21)	None	None	N/A	N/A
06-058	V70-3	HCL RAILCAR LOADING STATION WITH SCRUBBER (V70-3)*	None	None	N/A	N/A
06-061	V20-17A	NORTH COOLING POND (V20-17A)	None	None	N/A	N/A
06-062	V20-17B	SOUTH COOLING POND (V20-17B)	None	None	N/A	N/A
06-064	V20-15B	ACIDIFICATION/DEGASSING TANK (V20-15B)	None	None	N/A	N/A
06-067	V53-2A	ENCLOSURE VENTILATION SCRUBBER (EVS) CIRCULATION TANK (V53-2A)	None	None	N/A	N/A
06-068	V53-2B	ENCLOSURE VENTILATION SCRUBBER (EVS) CIRCULATION TANK (V53-2B)	None	None	N/A	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Scrubber controls hydrogen chloride fumes and is not required by any air regulation requirements.

** V-53-1 is a scrubber used to contain and destroy fugitive or accidental releases of chlorine gas that may occur inside the chlorine enclosure area of the brine recovery operations. This scrubber is a safety system integral to process operations and is not considered a control or recovery device.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

H.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission unit V20-7, and from the emission units included in Conditions G.2.1(b), G.3.1, I.1.1, I.3.1, and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, I.1.1, I.2.1, I.3.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

Section H consists of the following Sections: H.1, and H.2.

Condition H.2.1 concludes the Section H requirements of this permit

SECTION I.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Phosgene, Building 6

Phosgene Affected Facilities/Sources

(a) The Phosgene Reaction, Purification, and Transfer Operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
08-001	F-972	TAIL GAS SEPARATOR (WITH FLARE H-961)*	One of three scrubber systems: (C-962 and C-963) OR (C-966 and C-967) OR C-965	None	N/A	1979
08-004	F-902	CARBON SYSTEM BLOWER TRANSFER CYCLONE (K-909)	None	Bagfilter	2.0 tons/hr	N/A
08-007	V-967	EVS CAUSTIC SCRUBBER VENT C964	Scrubber C-964	None	N/A	N/A

Insignificant Activities[(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
08-003	F-901	CARBON SYSTEM BLOWER RAILCAR UNLOADING (K-901)	None	Bagfilter	2.0 tons/hr	N/A
08-005	V-969	VENT SCRUBBER RECIRCULATION TANK (V-969)	None	None	N/A	N/A
08-006	V-971A	CAUSTIC MAKE-UP TANK (V-971A)	None	None	N/A	N/A
08-008	V-951	CARBON TET. NEUTRALIZATION AND DRUM-OFF STATION (V-951)	None	None	N/A	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* H-961 is used to control CO emissions in the gas stream exiting the tail gas scrubber system. There are no regulatory requirements for this flare.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

I.1.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission units F-972, F-901, F-902, and from the emission units included in Conditions G.2.1(b), G.3.1, H.2.1, I.3.1, and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, H.2.1, I.2.1, I.3.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

I.1.2 Hazardous Air Pollutants (HAPs) [326 IAC 20] [40 CFR 63, Subpart SS] [40 CFR 63, Subpart YY]

(a) Pursuant to 40 CFR 63.1100, the Permittee shall comply with the National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards (GMACT) [40 CFR 63, Subpart YY] by meeting the applicable emission standards and monitoring provisions of 40 CFR 63.1103 (d), Table 5 for the LEXAN# Resin Polycarbonate Production Process Unit (LxrPPPU) process vent, F-972. The process vent F-972 is associated with the Phosgene production unit that is part of the polycarbonate production process unit identified as LxrPPPU; general requirements for the LxrPPPU can be found in Section G.1 of this permit.

(b) Pursuant to 40 CFR 63.1103(d), Table 5, the Permittee shall reduce total organic HAP to a concentration of 20 parts per million by volume and reduce hydrogen halides and halogens to less than 0.45 kg/hr by venting emissions from the process vent, F-972 into a tail gas scrubber system, identified as scrubbers, C-966 and C-967, meeting the requirements of Subpart SS, as specified in 40 CFR 63.982(a)(2). The specific applicable control and monitoring requirements of 40 CFR 63, Subparts YY and SS are listed in the table below. This table also provides the specific condition number where descriptions of these provisions can be found in Sections DD and EE. Instead of using the tail gas scrubber system, identified as scrubbers C-966 and C-967 to comply with the provisions listed below, the Permittee may elect one of the alternative operating scenarios for process vent F-972 as described in Condition I.1.3.

Section DD and EE Permit Condition	Applicable 40 CFR Part 63, Subpart YY or Subpart SS Requirement	Regulatory Citation Description	F-972
DD.2(d)	63.1103(d)	Source Category-Specific Applicability, Definitions, and Requirements	X
EE.1(a)	63.982(a)(2)	Requirements	X
EE.1(c)	63.982(c)	Requirements	X
EE.5(a)	63.990(a)	Absorbers, Condensers, and Carbon Adsorbers used as Control Devices	X
EE.7(a)	63.994(a)	Halogen Scrubbers and other Halogen Reduction Devices	X

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Section DD and EE Permit Condition	Applicable 40 CFR Part 63, Subpart YY or Subpart SS Requirement	Regulatory Citation Description	F-972
EE.8(b)	63.996(b)	General Monitoring Requirements For Control And Recovery Devices	X
EE.8(c)	63.996(c)	General Monitoring Requirements For Control And Recovery Devices	X
EE.8(d)	63.996(d)	General Monitoring Requirements For Control And Recovery Devices	X

(c) Pursuant to 40 CFR 63.996(d), USEPA has approved an alternative monitoring request in a letter dated April 5, 2002 so that the Permittee shall monitor Phosgene concentration in the gas stream exiting the scrubber that is used to comply with the GMACT (the tail gas scrubber system (C-966/C-967)) and/or the tail gas scrubber system (C-962/C-963), or the Emergency Destruct System scrubber (C-965) in lieu of (1) monitoring total organic hazardous air pollutants at the outlet of the scrubber being used as required by 40 CFR 63.990(c), and (2) monitoring the pH and scrubber liquid flow and determining the gas stream flow as required under 40 CFR 63.994(c) for the scrubber being used that also operates as a halogen reduction device. The Phosgene monitored parameter range representing proper operation of the scrubber system that is used to control emissions from the process vent F-972, shall be Phosgene concentrations that are less than or equal to 1.0 ppm.

I.1.3 Alternative Operating Scenario for F-972 to comply with GMACT [326 IAC 20] [40 CFR 63, Subpart YY]

Instead of using the tail gas scrubber system, identified as scrubbers C-966 and C-967 to comply with the provisions in Condition I.1.2(b), the Permittee may elect one of the following other tail gas scrubber system options to reduce total organic HAP to a concentration of 20 parts per million by volume and reduce halogen halides and halogens to less than 0.45 kg/hr by venting emissions from the process vent, F-972 through a closed vent system:

(a) If this alternative is chosen, then the Permittee shall use the tail gas scrubber system, identified as scrubbers, C-962 and C-963, meeting the requirements of Subpart SS, as specified in 40 CFR 63.982(a)(2) to comply with the alternative operating scenario of this condition. The specific applicable control and monitoring provisions are listed in the table of Condition I.1.2(b); or

(b) If this alternative is chosen, then the Permittee shall use both tail gas scrubber systems, identified as scrubbers, C-962 and C-963, and C-966 and C-967, meeting the requirements of Subpart SS, as specified in 40 CFR 63.982(a)(2) to comply with the alternative operating scenario of this condition. The specific applicable control and monitoring provisions are listed in the table of Condition I.1.2(b).

(c) If this alternative is chosen, then the Permittee shall use the Emergency Destruct System (EDS) scrubber, identified as scrubber C-965, meeting the requirements of Subpart SS, as specified in 40 CFR 63.982(a)(2) to comply with the alternative operating scenario of

this condition. The specific applicable control and monitoring provisions are listed in the table of Condition I.1.2(b).

I.1.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the following emission units shall not exceed the calculated rates given in pounds per hour when operating at the maximum process weight rate shown in the table below. The current maximum process weight rate shown is not a limitation. The pounds per hour limitations were calculated using the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Stack/Vent ID	Emission Unit ID	Max Process Weight Rate (tons/hr)	Rate of Emission (lb/hr)
08-003	F-901	2.0	6.52
08-004	F-902	2.0	6.52

Compliance Determination Requirements

I.1.5 Organic HAP Control [326 IAC 2-7-6(6)]

In order to comply with Condition I.1.2, at least one of the scrubber systems identified as C-962 and C-963, or C-966 and C-967 or C-965, shall be in operation at all times F-972 is in operation, except as otherwise provided in 40 CFR 63.1108.

I.1.6 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Condition I.1.4, the bagfilters on emission units F-901 and F-902 shall be in operation at all times that these facilities are in operation and the filter is necessary to maintain emissions at or below the allowable emission rate.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

I.1.7 Record Keeping Requirements

(a) Pursuant to 40 CFR 63, Subpart SS and to document the compliance status with Condition I.1.2 or the alternative operating scenarios given in Condition I.1.3, the Permittee shall keep records as specified in the following 40 CFR 63, Subpart SS applicable requirements which are described in Section EE.

Section EE Permit Condition	Applicable 40 CFR Part 63, Subpart SS Requirement	Regulatory Citation Description	F-972
EE.12(a)	63.998(a)	Recordkeeping Requirements	X
EE.12(b)	63.998(b)	Recordkeeping Requirements	X
EE.12(c)	63.998(c)	Recordkeeping Requirements	X
EE.12(d)	63.998(d)	Recordkeeping Requirements	X

(b) All records required to be maintained by Condition I.1.7 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

I.1.8 Reporting Requirements

(a) Pursuant to 40 CFR 63, Subpart SS and to document compliance with Condition I.1.2, the Permittee shall submit reports as specified in 40 CFR 63.999(c) [described in EE.13(c)] and 40 CFR 63.1110 [described in DD.9].

(b) The Permittee shall submit the reports and records required to be submitted by Condition I.1.8 to the address listed in Section C - General Reporting Requirements, of this permit.

(c) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it operates under as detailed in Condition I.1.3. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

SECTION I.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Phosgene, Building 6

Phosgene Carbon Monoxide Generators and COS (Carbonyl Sulfide) Stream

(b) The Phosgene Carbon Monoxide Generators consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit*	Emission Unit Description	Air Pollution Control Devices**	Integral Devices[(b)] ***	Maximum Capacity[(c)]	Date of Construct
08-010	COG1	CO GENERATOR NO. 1	COS Vent Oxidizer (08-706) OR COS Flare (08-707)	Carbon Adsorbers V-948, V-949, V-050A, V-951A, V-9020, V-9021	0.17 tons/hr	N/A
08-011	COG2	CO GENERATOR NO. 2			0.17 tons/hr	N/A
08-012	COG3	CO GENERATOR NO. 3			0.17 tons/hr	N/A
08-013	COG4	CO GENERATOR NO. 4			0.17 tons/hr	N/A
08-014	COG5	CO GENERATOR NO. 5			0.17 tons/hr	N/A
08-015	COG6	CO GENERATOR NO. 6			0.17 tons/hr	N/A
08-016	COG7	CO GENERATOR NO. 7			0.17 tons/hr	N/A
08-017	COG8	CO GENERATOR NO. 8			0.17 tons/hr	N/A
08-018	COG9	CO GENERATOR NO. 9			0.17 tons/hr	N/A
08-019	COG10	CO GENERATOR NO. 10			0.17 tons/hr	N/A
08-020	COG11	CO GENERATOR NO. 11			0.17 tons/hr	N/A
08-021	COG12	CO GENERATOR NO. 12			0.17 tons/hr	N/A
08-022	COG13	CO GENERATOR NO. 13			0.17 tons/hr	N/A
08-023	COG14	CO GENERATOR NO. 14			0.17 tons/hr	N/A
08-024	COG15	CO GENERATOR NO. 15			0.17 tons/hr	N/A
08-025	COG16	CO GENERATOR NO. 16			0.17 tons/hr	N/A
08-708	F-961A	F-961A CO BAGHOUSE	None	None	5.78 tons/hr	2006
08-709	F-961B	F-961B CO BAGHOUSE	None	None	5.78 tons/hr	2006
08-710	V-961A	F-961A BAGHOUSE RECEIVER	None	None	N/A	2006
08-711	V-961B	F-961B BAGHOUSE RECEIVER	None	None	N/A	2006

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

* The 16 CO generators operate in a continuous mode and the CO produced by the generators is normally routed through the purification system and into the phosgene reactor. Each of the 16 generators has a stack/vent that is only used during startup, shutdown, and malfunction events.

** BEFORE Shutdown of E BOILER and BW-BOILER - In addition to having the option to use the COS Vent Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either the E BOILER, BW BOILER, and/or R BOILER. These boilers are described in Section K of this permit. The COS Flare (08-707) only serves as aback-up to the COS Vent Oxidizer (08-706) or during safety interlock of the system.

** AFTER Shutdown of E BOILER and BW-BOILER- In addition to having the option to use the COS Vent Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to R BOILER. This boiler is described in Section K of this permit. The COS Flare (08-707) only serves as a back-up to the COS Vent Oxidizer (08-706) or during safety interlock of the system.

*** These carbon adsorbers purify the carbon monoxide as it flows from the CO generators to the phosgene reactor. Without the purification, the carbon monoxide quality is not adequate to produce phosgene that is suitable for use in polycarbonate production. Downstream of the adsorbers is a chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

I.2.1 BEFORE Shutdown of BW-BOILER and E BOILER **-** Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boilers listed in Condition K.2.1 (E BOILER, BW-BOILER, and/or R BOILER).

(a) The total sulfur input to the carbon monoxide generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16 and the coal-fired boiler (E BOILER) listed in Condition K.2.1(a)(1) shall not exceed 2,536.75 tons in any 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

*Daily Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke) + Daily Coal Usage * (wt% Sulfur of Coal)*

(b) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour or the rate determined in the most recent stack test of the E BOILER such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent absorbers identified as V-723 and V-519, and the emission units included in Conditions G.2, G.3, H.2, I.1, I.3, J.1, and K.2) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.3, J.1, and K.2 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

(c) Whenever the carbonyl sulfide stream, COS is being vented to the COS Vent Oxidizer for the destruction of organic sulfides, the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis. The sulfur inputs shall be determined according to the following equation:

*Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)*

Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

(d) Whenever the carbonyl sulfide stream, COS is being vented to the COS Flare for the destruction of organic sulfides (used only as a back-up to the COS Vent Oxidizer **or** during safety interlock of the system), the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis. The sulfur inputs shall be determined according to the following equation:
*Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)*
Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

Compliance with these conditions and Conditions G.2.1 and K.2.1(a) will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons per year each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

I.2.1 AFTER Shutdown of BW-BOILER and E BOILER Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boiler listed in Condition K.2.1 (R BOILER).

(a) The total sulfur input to the carbon monoxide generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16 shall not exceed 928.65 tons in any 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

*Daily Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)*

(b) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent absorbers identified as V-723 and V-519, and the emission units included in Conditions G.2, G.3, H.2, I.1, I.3, and J.1) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

(c) Whenever the carbonyl sulfide stream, COS is being vented to the COS Vent Oxidizer for the destruction of organic sulfides, the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis. The sulfur inputs shall be determined according to the following equation:

*Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)*

Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

(d) Whenever the carbonyl sulfide stream, COS is being vented to the COS Flare for the destruction of organic sulfides (used only as a back-up to the COS Vent Oxidizer or during safety interlock of the system), the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis. The sulfur inputs shall be determined according to the following equation:
*Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)*
Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

Compliance with these conditions and Conditions G.2.1 and K.2.1(a) will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons per year

each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

I.2.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16 shall not exceed the rates calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for these emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
08-010	COG1	0.17	1.25
08-011	COG2	0.17	1.25
08-012	COG3	0.17	1.25
08-013	COG4	0.17	1.25
08-014	COG5	0.17	1.25
08-015	COG6	0.17	1.25
08-016	COG7	0.17	1.25
08-017	COG8	0.17	1.25
08-018	COG9	0.17	1.25
08-019	COG10	0.17	1.25
08-020	COG11	0.17	1.25
08-021	COG12	0.17	1.25
08-022	COG13	0.17	1.25
08-023	COG14	0.17	1.25
08-024	COG15	0.17	1.25
08-025	COG16	0.17	1.25

Compliance Determination Requirements

I.2.3 BEFORE Shutdown of BW- BOILER and E BOILER - Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boilers listed in Condition K.2.1 (E BOILER, BW BOILER and/or R BOILER).

(a) In order to comply with Condition I.2.1, at least one of the control devices used for organic sulfide control (COS Vent Oxidizer or COS Flare or E BOILER, BW-BOILER, or R BOILER**,** described in Section K) shall be in operation and control organic sulfide emissions from the COS stream at all times any of the carbon monoxide adsorbers are being regenerated.

(b) To determine compliance with Condition I.2.1(a):

(1) The sulfur content of the coke used in the carbon monoxide generators shall be analyzed daily as received (vendor delivery analysis may be used, approved by IDEM on 8/1/05) for each day the carbon monoxide generators operate; and

(2) The sulfur content of the coal used by E BOILER described in Condition K.2.1(a)(1) shall be analyzed daily (the sulfur content determined pursuant to condition K.2.11(b) may be used).

(c) To determine compliance with Condition I.2.1(b) and whenever the COS stream is vented to at least two types of control devices permitted for use (the COS Oxidizer and COS Flare described in this section; or boilers as described in Section K) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the E BOILER equal:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the E BOILER) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of COS Vent Oxidizer as determined in the most recent stack test)*

(C) Daily VOC emissions from the COS Flare equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)*

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to at least two types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by E BOILER, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the E BOILER, multiplied by the number of hours the organic sulfides were vented to the E BOILER; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the COS Flare, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides

were vented to the COS Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

(d) The gas chromatograph (GC) (also known as the sulfur GC) shall operate as follows:

(1) The GC shall operate during all periods of operation of the carbon monoxide generators except for GC breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(2) At such time that the GC detects carbonyl sulfide at a level of 150 ppmv, carbon disulfide at a level of 10 ppmv, or hydrogen sulfide at a level of 50 ppmv in the carbon monoxide stream from the carbon adsorber, the appropriate carbon adsorber shall be taken off-line immediately and the carbon monoxide feed shall be sent to another carbon adsorber.

I.2.3 AFTER Shutdown of BW-BOILER and E BOILER - Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boiler listed in Condition K.2.1 (R BOILER).

(a) In order to comply with Condition I.2.1, at least one of the control devices used for organic sulfide control (COS Vent Oxidizer or COS Flare; or R BOILER, described in Section K) shall be in operation and control organic sulfide emissions from the COS stream at all times any of the carbon monoxide adsorbers are being regenerated.

(b) To determine compliance with Condition I.2.1(a):

(1) The sulfur content of the coke used in the carbon monoxide generators shall be analyzed daily as received (vendor delivery analysis may be used, approved by IDEM on 8/1/05) for each day the carbon monoxide generators operate; and

(2) [RESERVED]

(c) To determine compliance with Condition I.2.1(b) and whenever the COS stream is vented to at least two types of control devices permitted for use (COS Oxidizer and COS Flare described in this section; or R BOILER described in Section K) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the R BOILER equal:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the R BOILER) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of COS Vent Oxidizer as determined in the most recent stack test)*

(C) Daily VOC emissions from the COS Flare equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)*

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to at least two types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by R BOILER, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the R BOILER, multiplied by the number of hours the organic sulfides were vented to the R BOILER; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the COS Flare, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

(d) The gas chromatograph (GC) (also known as the sulfur GC) shall operate as follows:

(1) The GC shall operate during all periods of operation of the carbon monoxide generators except for GC breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(2) At such time that the GC detects carbonyl sulfide at a level of 150 ppmv, carbon disulfide at a level of 10 ppmv, or hydrogen sulfide at a level of 50 ppmv in the carbon monoxide stream from the carbon adsorber, the appropriate carbon adsorber shall be taken off-line immediately and the carbon monoxide feed shall be sent to another carbon adsorber.

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

I.2.4 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition I.2.1(b), the Permittee shall perform VOC testing for the COS Vent Oxidizer when organic sulfides are being vented to them using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(b) If the Permittee makes any change or modification to the COS Vent Oxidizer to affect the conversion of organic sulfides (VOC emissions), the Permittee shall perform a compliance stack test for organic sulfides within 60 days after achieving the maximum production rate but no later than 180 days after making such change or modification. The new organic sulfides emissions level determined by the compliance stack test shall, beginning ten (10) business days after OAQ receives the test report for the compliance stack test, be used by the Permittee to calculate compliance with the VOC emissions limit in Condition I.2.1(b).

(c) The Permittee shall not make any change or modification to the COS Flare to affect the conversion of organic sulfides without the prior written approval of IDEM, OAQ.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

I.2.5 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

(a) To ensure that the COS Vent Oxidizer operates at a destruction efficiency for organic sulfides of 99%, or other destruction efficiency used in the equation in Condition I.2.3(c)(1)(B), when organic sulfides are vented to the COS Vent Oxidizer, the COS Vent Oxidizer shall maintain a minimum operating temperature of 1,200°F, or a temperature determined in the most recent compliance stack test. When for any three (3) hour average reading (arithmetic average of three contiguous one-hour periods), the operating temperature average is below the established minimum temperature, the Permittee shall take reasonable steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps, shall be considered a deviation from the limitation set forth in Condition I.2.1(b) of this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) When the COS stream is being vented to the COS Flare to control organic sulfides emissions from the LEXAN# production facility, the presence of a flare pilot flame (for COS Flare) shall be monitored using a thermocouple or any other equivalent device, to detect the presence of a flame and to sound an alarm when the flame is not detected.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

I.2.6 BEFORE Shutdown of BW- BOILER and E BOILER - Record Keeping Requirements

(a) To document the compliance status with Conditions I.2.1 and I.2.3 the Permittee shall maintain the following records:

(1) Identity of each type of control device (oxidizer or flare, or boilers as described in Section K) to which the COS stream is vented for Organic Sulfide control and the amount of time during a calendar day that the type of control device is in use, except failure to maintain such records and calculating compliance pursuant to Condition I.2.3(c)(3) shall not be a deviation from this requirement.

(2) The total daily sulfur input, and the 365-day rolling total of total daily sulfur input, to the E BOILER, and carbon monoxide generators.

(3) Daily analyses of sulfur content of coke received for use by the carbon monoxide generators.

(4) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition I.2.3(c).

.

(6) The measured operating temperature of the COS Vent Oxidizer during periods when used as an organic sulfides control device.

(7) Records of flame presence at the COS Flare during periods when used as an organic sulfides control device.

(d) All records required to be maintained by Condition I.2.6 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

I.2.6 AFTER Shutdown of BW-BOILER and E BOILER Record Keeping Requirements

(a) To document the compliance status with Conditions I.2.1 and I.2.3 the Permittee shall maintain the following records:

(1) Identity of each type of control device (oxidizer or flare, or R BOILER as described in Section K) to which the COS stream is vented for Organic Sulfide control and the amount of time during a calendar day that the type of control device is in use, except failure to maintain such records and calculating compliance pursuant to Condition I.2.3(c)(3) shall not be a deviation from this requirement.

(2) [RESERVED]

(3) Daily analyses of sulfur content of coke received for use by the carbon monoxide generators.

(4) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition I.2.3(c).

.

(6) The measured operating temperature of the COS Vent Oxidizer during periods when used as an organic sulfides control device.

(7) Records of flame presence at the COS Flare during periods when used as an organic sulfides control device.

(d) All records required to be maintained by Condition I.2.6 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

I.2.7 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition I.2.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition. [The reporting form for documenting compliance with Condition I.2.1(b) is located at the end of Section K of this permit].

SECTION I.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Phosgene, Building 6

<u>Phosgene Heat Exchange System and Area Waste</u>

(c) The Phosgene heat exchange system includes cooling towers identified as PHG CTC1, PHG CTC2, PHG CTC3, PHG CTC4, PHG CTC5, PHG CTC6, PHG CTC7, PHG CTC8.

(d) [Reserved]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

I.3.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission units PHG CTC1, PHG CTC2, PHG CTC3, PHG CTC4, PHG CTC5, PHG CTC6, and from the emission units included in Conditions G.2.1(b), G.3.1, H.2.1, I.1.1, and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, H.2.1, I.1.1, I.2.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

I.3.2 Record Keeping Requirements

(a) Pursuant to 40 CFR 63, Subpart YY, the Permittee shall comply with the HON process wastewater requirements in 40 CFR 63.132 through 63.148, Subpart G except as otherwise specified in 40 CFR 63.1106.

(b) All records required to be maintained by Condition I.3.2 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Section I consists of the following Sections: I.1, I.2, I.3, and two (2) Part 70 Usage Report forms.

Condition I.3.2 concludes the Section I requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Usage Report

(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition I.2.1(a) - This condition will cease to apply after shutdown of E BOILER.
Facility: CO Generators
Parameter: SO2
Limit: The overall total sulfur input to the carbon monoxide generators and the coal-fired boilers listed in Condition K.2.1(a)(1) shall not exceed 2,536.75 tons in any 365-day period, rolled on a daily basis.

Year: _____Month: _____

Day	Sulfur input this day (tons/day)	Sulfur input for the last 365-day period (tons)	Day	Sulfur input this day (tons/day)	Sulfur input for the last 365-day period (tons)
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			no. of deviations		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

This form will cease to apply after shutdown of E BOILER.

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition I.2.1(a),(c) and (d)
Facility: CO Generators
Parameter: Sulfur input (VOC and SO2 limits)
Limit: When using the COS Vent Oxidizer or the COS Flare, the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis.

Year: _____ Month: _____

Day	Sulfur Input this day (ton/day)	Sulfur Input for the last 365-day period	Day	Sulfur Input this day (ton/day)	Sulfur Input for the last 365-day period
1			**17**		
2			**18**		
3			**19**		
4			**20**		
5			**21**		
6			**22**		
7			**23**		
8			**24**		
9			**25**		
10			**26**		
11			**27**		
12			**28**		
13			**29**		
14			**30**		
15			**31**		
16			**no. of deviations**		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____
Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

SECTION J.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: LEXAN# Finishing, Building 13

LEXAN# Finishing Operations

(a) The LEXAN# Finishing operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-148	SILO 67	RESIN SILO 67	None	Filter	32.5 tons/hour	N/A
07-149	SILO 68	RESIN SILO 68	None	Filter	32.5 tons/hour	N/A
07-156	SILO 69	RESIN SILO 69	None	Filter	32.5 tons/hour	N/A
07-157	SILO 70	RESIN SILO 70	None	Filter	32.5 tons/hour	N/A
07-188	SILO 71	RESIN SILO 71	None	Filter	32.5 tons/hour	1995

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-001	CMEX	COLOR MATCHING EXTRUDER	None	None	less than 100 lb/hr	N/A
07-002	MM4	MOLDING MACHINE #4	None	None	less than 100 lb/hr	N/A
07-002	MM5	MOLDING MACHINE #5	None	None	less than 100 lb/hr	N/A
07-002	MM6	MOLDING MACHINE #6	None	None	less than 100 lb/hr	N/A
07-011	QAFOH	QA FLAME OUT HOOD	None	None	less than 100 lb/hr	N/A
07-012	QAAH	QA ASHING HOOD	None	None	less than 100 lb/hr	N/A
07-013	QA SP HOOD	QA SAMPLE PREPARATION HOOD	None	None	less than 100 lb/hr	N/A
07-015	L-20 PB	LINE 20 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-016	L-21 PB	LINE 21 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	2.5 tons/hour	N/A
07-017	M&N DUST	M & N VERTIMIXERS BAGHOUSE	None	Filter	0.63 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-018	L-22 PB	LINE 22 POWDER BIN FILTER	None	Filter	2.30 tons/hour	N/A
07-019	L-23 PB	LINE 23 POWDER BIN FILTER	None	Filter	1.13 tons/hour	N/A
07-020	L-24 PB	LINE 24 POWDER BIN FILTER	None	Filter	2.48 tons/hour	N/A
07-022	L-25 PB	LINE 25 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A
07-023	SP1-BF	POT #1 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-024	SPA-BF	POT A BAG HOUSE	None	Filter	7.5 tons/hour	N/A
07-025	L-26PR	LINE 26 POWDER BIN FILTER	None	Filter	1.75 tons/hour	N/A
07-026	L-27PB	LINE 27 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A
07-027	L-28PB	LINE 28 POWDER BIN FILTER	None	Filter	4.25 tons/hour	N/A
07-028	L-29PB	LINE 29 POWDER BIN FILTER	None	Filter	4.25 tons/hour	N/A
07-029	SPB-BF	POT B BAG HOUSE	None	Filter	7.5 tons/hour	N/A
07-030	L-30PB	LINE 30 POWDER BIN FILTER	None	Filter	3.25 tons/hour	N/A
07-031	L-31PB	LINE 31 POWDER BIN FILTER	None	Filter	3.25 tons/hour	N/A
07-032	SILO 57 RH	RESIN SILO 57	None	Filter	32.5 tons/hour	N/A
07-033	SILO 58 RH	RESIN SILO 58	None	Filter	32.5 tons/hour	N/A
07-034	L-28 RH	LINE #28 ROOF HOPPER BAG HOUSE	None	Filter	4.25 tons/hour	N/A
07-035	L-27 RH	LINE #27 ROOF HOPPER BAG HOUSE	None	Filter	4.25 tons/hour	N/A
07-036	L-26 RH	LINE #26 ROOF HOPPER BAG HOUSE	None	Filter	1.75 tons/hour	N/A
07-037	L-25 RH	LINE #25 ROOF HOPPER BAG HOUSE	None	Filter	2.75 tons/hour	N/A
07-038	L-24 RH	LINE #24 ROOF HOPPER BAG HOUSE	None	Filter	2.75 tons/hour	N/A
07-039	L-23 RH	LINE #23 ROOF HOPPER BAG HOUSE	None	Filter	1.25 tons/hour	N/A
07-040	L-22 RH	LINE #22 ROOF HOPPER BAG HOUSE	None	Filter	2.5 tons/hour	N/A
07-041	L-21 RH	LINE #21 ROOF HOPPER BAG HOUSE	None	Filter	2.5 tons/hour	N/A
07-042	L-20 RH	LINE #20 ROOF HOPPER BAG HOUSE	None	Filter	1.75 tons/hour	N/A
07-043	SILO 59RH	RESIN SILO 59	None	Filter	32.5 tons/hour	N/A
07-044	SILO 60 RH	RESIN SILO 60	None	Filter	32.5 tons/hour	N/A
07-045	SILO 61 RH	RESIN SILO 61	None	Filter	32.5 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-046	SILO 62 RH	RESIN SILO 62	None	Filter	32.5 tons/hour	N/A
07-049	L-10 BV	LINE #10 ROOF HOPPER BAGHOUSE	None	Filter	1.25 tons/hour	N/A
07-050	L-11 BV	LINE #11 ROOF HOPPER BAGHOUSE	None	Filter	1.75 tons/hour	N/A
07-051	L-12 BV	LINE #12 ROOF HOPPER BAGHOUSE	None	Filter	1.25 tons/hour	N/A
07-052	L-13 BV	LINE #13 ROOF HOPPER BAGHOUSE	None	Filter	0.55 tons/hour	N/A
07-053	L-14 BV	LINE #14 ROOF HOPPER BAGHOUSE	None	Filter	1.5 tons/hour	N/A
07-054	L16ED	LINE 16 EXTRUDER, DIE AND VACUUM VENT	None	None	0.75 tons/hour	N/A
07-055	L-15 RH	LINE #15 ROOF HOPPER BAGHOUSE	None	Filter	1.5 tons/hour	N/A
07-056	L-16 RH	LINE #16 ROOF HOPPER BAGHOUSE	None	Filter	0.75 tons/hour	N/A
07-057	L-17 RH	LINE #17 ROOF HOPPER BAGHOUSE	None	Filter	0.75 tons/hour	N/A
07-059	L13ED	LINE 13 EXTRUDER AND DIE VENT	None	None	0.55 tons/hour	N/A
07-060	L17ED	LINE 17 EXTRUDER, DIE AND VACUUM VENT	None	None	0.75 tons/hour	N/A
07-061	L15ED	LINE 15 EXTRUDER AND DIE VENT	None	None	1.5 tons/hour	N/A
07-062	L14ED	LINE 14 EXTRUDER AND DIE VENT	None	None	1.5 tons/hour	N/A
07-063	L27ED	LINE 27 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-064	L10 ED	LINE 10 EXTRUDER AND DIE VENT	None	None	1.25 tons/hour	N/A
07-065	L11ED	LINE 11 EXTRUDER AND DIE VENT	None	None	1.75 tons/hour	N/A
07-066	L12ED	LINE 12 EXTRUDER AND DIE VENT	None	None	1.25 tons/hour	N/A
07-067	L26ED	LINE 26 EXTRUDER AND DIE VENT	None	None	1.75 tons/hour	N/A
07-069	L24ED	LINES 23, 24 & 25 EXTRUDER, DIE AND VACUUM VENTS THROUGH HEAF #2 (SOUTH)	HEAF1 or HEAF2	None	N/A	N/A
07-070	L23ED	LINES 23, 24 & 25 EXTRUDER, DIE AND VACUUM VENTS THROUGH HEAF #1 (NORTH)	HEAF1 or HEAF2	None	N/A	N/A
07-070	L25ED	LINE 25 EXTRUDER AND DIE VENT	HEAF1 or HEAF2	None	N/A	N/A
07-071	L22ED	LINE 22 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-072	L21ED	LINE 21 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-073	L20ED	LINE 20 EXTRUDER AND DIE VENT	None	None	1.75 tons/hour	N/A
07-075	PBAGGER 1	POWDER BAGGER #1 ROOF HOPPER RECEIVER	None	Filter	7.5 tons/hour	N/A
07-076	DFOST	DIESEL FUEL OIL STORAGE TANK	None	None	N/A	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-079	PDC-C	PACKAGING DUST COLLECTOR C BAG HOUSE	None	Filter	0.55 tons/hour	N/A
07-080	PDC-D	PACKAGING DUST COLLECTOR D BAG HOUSE	None	Filter	0.55 tons/hour	N/A
07-086	REC FIL E	RECYCLE BAG HOUSE BLOWER E	None	Filter	8.35 tons/hour	N/A
07-087	REC FIL F	RECYCLE BAG HOUSE BLOWER F	None	Filter	8.35 tons/hour	N/A
07-092	L10EVP	Line 10 Extruder Vacuum Pump	None	None	1.25 tons/hour	N/A
07-092	L11EVP	Line 11 Extruder Vacuum Pump	None	None	1.75 tons/hour	N/A
07-092	L15EVP	Line 15 Extruder Vacuum Pump	None	None	1.5 tons/hour	N/A
07-092	L17EVP	LINE 17 EXTRUDER VACUUM PUMP	None	None	0.75 tons/hour	N/A
07-094	SILO 63	RESIN SILO 63	None	Filter	32.5 tons/hour	N/A
07-095	SILO 64	RESIN SILO 64	None	Filter	32.5 tons/hour	N/A
07-096	SILO 65	RESIN SILO 65	None	Filter	32.5 tons/hour	N/A
07-097	SILO 66	RESIN SILO 66	None	Filter	32.5 tons/hour	N/A
07-098	TRUCK FIL	BULK POWDER TRUCK LOADING STATION #1	None	Filter	7.5 tons/hour	N/A
07-099	SP2-BF	POT #2 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-100	SP3-BF	POT #3 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-101	L28ED	LINE 28 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-104	VPL-29	LINE 29 VACUUM PUMP	None	None	4.25 tons/hour	N/A
07-104	VPL-30	LINE 30 VACUUM PUMP	None	None	3.25 tons/hour	N/A
07-104	VPL-31	LINE 31 VACUUM PUMP	None	None	3.25 tons/hour	N/A
07-105	L29ED	LINE 29 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-106	L30ED	LINE 30 EXTRUDER AND DIE VENT	None	None	3.25 tons/hour	N/A
07-107	L31ED	LINE 31 EXTRUDER AND DIE VENT	None	None	3.25 tons/hour	N/A
07-108	L-29 RH	LINE #29 ROOF HOPPER BAG HOUSE	None	Filter	4.25 tons/hour	N/A
07-109	L-30 RH	LINE #30 ROOF HOPPER BAG HOUSE	None	Filter	3.25 tons/hour	N/A
07-110	L-31 RH	LINE #31 ROOF HOPPER BAG HOUSE	None	Filter	3.25 tons/hour	N/A
07-115	CVSA	CENTRAL VACUUM SYSTEM A BAG HOUSE	None	Filter	1.25 tons/hour	N/A
07-116	CVSB	CENTRAL VACUUM SYSTEM B BAG HOUSE	None	Filter	1.25 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-117	REC FIL G	RECYCLE BAG HOUSE BLOWER G	None	Filter	8.35 tons/hour	N/A
07-119	SAVS	PAD VACUUM BAG HOUSE	None	Filter	0.25 tons/hour	N/A
07-120	DC-6	CPF ROOF HOPPERS BAG HOUSE (C1, C2, C7 & C10)	None	Cartridge Filter and Cyclones	1.5 tons/hour	N/A
07-121	20-S-C9-02	LINES C7, C20 & C22 ROTOCLONE	None	None	7.2 tons/hour	N/A
07-122	10-S-10NPI	C3, C5 NPI EXTRUDER FEED HOPPERS	None	Filter	0.9 tons/hour	N/A
07-123	C14/16 ROT	LINES C14/16 BLENDER ROTOCLONE	None	None	3.75 tons/hour	N/A
07-126	LC2D	LINE C2 EXTRUDER AND DIE VENT	None	None	0.7 tons/hour	N/A
07-127	LC1D	LINE C1 & C3 EXTRUDER AND DIE VENT	None	None	0.9 tons/hour	N/A
07-127	LC3D	LINE C3 EXTRUDER AND DIE VENT	None	None	0.9 tons/hour	N/A
07-128	LC7D	LINE C7 EXTRUDER AND DIE VENT	None	None	0.45 tons/hour	N/A
07-130	LC14D	LINE C14 EXTRUDER AND DIE VENT	None	None	1.25 tons/hour	N/A
07-131	LC14V	LINE C14 CPF VACUUM	None	None	1.25 tons/hour	N/A
07-131	LC16V	LINE C16 CPF VACUUM	None	None	2.5 tons/hour	N/A
07-131	LC18V	LINE C18 CPF VACUUM	None	None	2.5 tons/hour	N/A
07-132	WCV	CPF CENTRAL VACUUM SYSTEM BAG HOUSES	None	None	1.25 tons/hour	N/A
07-134	20-M-C1-01	CPF ROTOCLONE SYSTEM FOR BLENDER C1	None	CPF OS ROT	less than 100 lb/hr	N/A
07-134	20-M-C10-1	CPF ROTOCLONE SYSTEM FOR BLENDER C10	None	CPF ES ROT	less than 100 lb/hr	N/A
07-134	20-M-C2-01	CPF ROTOCLONE SYSTEM FOR BLENDER C2	None	CPF ES ROT	less than 100 lb/hr	N/A
07-134	20-M-C3-01	CPF ROTOCLONE SYSTEM FOR BLENDER C3	None	CPF OS ROT	less than 100 lb/hr	N/A
07-134	20-M-C7-01	CPF ROTOCLONE SYSTEM FOR BLENDER C7	None	CPF OS ROT	less than 100 lb/hr	N/A
07-134	20-M-C8-01	CPF ROTOCLONE SYSTEM FOR BLENDER C8	None	CPF ES ROT	less than 100 lb/hr	N/A
07-135	VTBC14	LINE C14 & C16 VACUUM RECEIVER BLOWER	None	Filter	3.75 tons/hour	N/A
07-136	CMM1	CPF MOLDING MACHINE #1	None	None	less than 100 lb/hr	N/A
07-136	CMM2	CPF MOLDING MACHINE #2	None	None	less than 100 lb/hr	N/A
07-136	CMM3	CPF MOLDING MACHINE #3	None	None	less than 100 lb/hr	N/A
07-137	BVC1	LINES C1 & C7 VACUUM VENT	None	None	0.75 tons/hour	N/A
07-137	BVC3	CPF BARREL VACUUM VENT C3	None	None	0.3 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-137	BVC5	CPF BARREL VACUUM VENT C5	None	None	0.45 tons/hour	N/A
07-137	BVC7	CPF BARREL VACUUM VENT C7	None	None	0.45 tons/hour	N/A
07-139	BVC2	CPF BARREL VACUUM VENT C2	None	None	0.7 tons/hour	N/A
07-150	L-14PPC	LINE #14 PPC ROOF HOPPER BAG HOUSE	None	Filter	1.5 tons/hour	N/A
07-153	VDCS	BINS 51-56 AND K & L VERT DUST COLLECTOR	None	None	12.5 tons/hour	N/A
07-154	FGHJ VDC	F, G, H & J VERT DUST COLLECTOR	None	None	12.5 tons/hour	N/A
07-159	LC16D	LINE C16 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-159	LC18D	LINE C18 DIE VENT	None	None	2.5 tons/hour	N/A
07-161	SS1 BV	CO581 SAN SILO BAG HOUSE	None	Filter	1.35 tons/hour	N/A
07-162	SAN-RH	CO581 SAN ROOF HOPPER RECEIVER	None	Filter	1.35 tons/hour	N/A
07-163	ASC HCF	LINE 23, 24 & 25 ACRYLO SAN CO556 HOPPER CARTRIDGE FILTER	None	Filter	0.75 tons/hour	N/A
07-164	L23/24 SH	CO581 SAN ROOF HOPPER CARTRIDGE FILTER	None	Filter	1.35 tons/hour	N/A
07-166	HRG UL DC	SAN & HRG UNLOADING RECEIVER	None	Filter	3.5 tons/hour	N/A
07-167	HRG S1C	C29292 HRG SILO RECEIVER	None	Filter	2 tons/hour	N/A
07-168	HRG S2C	C29170 HRG SILO RECEIVER	None	Filter	2 tons/hour	N/A
07-169	HRG SILO 1	C29292 HRG SILO CONSERVATION VENT	None	None	2 tons/hour	N/A
07-170	HRG SILO 2	C29170 HRG SILO CONSERVATION VENT	None	None	2 tons/hour	N/A
07-171	HRG S1 DRV	C29292 HRG SILO ROTARY VALVE VENT	None	None	2 tons/hour	N/A
07-172	HRG S2 DRV	C29170 HRG SILO ROTARY VALVE VENT	None	None	2 tons/hour	N/A
07-173	HRG L23/24	LINES 23 & 24 HRG ROOF HOPPER RECEIVER	None	Filter	2.1 tons/hour	N/A
07-175	HRG 23/241	LINES 23 & 24 HRG ROOF HOPPER CONSERVATION VENT	None	None	2.1 tons/hour	N/A
07-176	HRG 23/242	LINES 23 & 24 HRG ROOF HOPPER CONSERVATION VENT	None	None	2.1 tons/hour	N/A
07-177	RDPST	RDP STORAGE TANK	None	None	N/A	N/A
07-180	RL23	LINE 23 RECYCLE HOPPER CARTRIDGE FILTER	None	Filter	1.25 tons/hour	N/A
07-182	RL24	LINE 24 RECYCLE HOPPER CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A
07-183	L30AF-BV	L30 ADDITIVE FEEDER BIN	None	L30 ROTO	less than 100 lb/hr	N/A
07-183	L30FT BV	CART. FILTER 13-PA037	None	L30 ROTO	less than 100 lb/hr	N/A
07-185	C3EVP	LINE C3 VACUUM VENT	None	None	0.3 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-186	C5EVP	LINE C5 VACUUM VENT	None	None	0.45 tons/hour	N/A
07-192	RPDH	BROWN BAG POWDER BAGGING DUST COLLECTOR	None	Filter	0.65 tons/hour	N/A
07-194	RGT/CRG	REGRINDER C, D & E AND METAL DETECTION BAG HOUSE	None	Filter	25 tons/hour	N/A
07-195	CMH	COLOR MATCHING HOPPER BAG HOUSE	None	Filter	less than 100 lb/hr	N/A
07-197	BCB	STARTUP/RECYCLE DUST COLLECTOR SPARE BLOWER	None	Filter	6 tons/hour	N/A
07-199	L25/26XTH	LINES 25 & 26 XT HOPPER	None	Filter	4.5 tons/hour	N/A
07-200	L30/31B2RH	LINE #30 & 31 ROOF HOPPER #2 BAG HOUSE	None	Filter	6.5 tons/hour	N/A
07-201	L28/29B2RH	LINE #28 & 29 ROOF HOPPER #2 BAG HOUSE	None	Filter	8.5 tons/hour	N/A
07-202	L30CDC	LINE 30 STARTUP/RECYCLE BAG HOUSE	None	Filter	3.25 tons/hour	N/A
07-204	10-S-06	CPF RESIN BINS 1 THRU 5 BAG HOUSE	None	Filter	3.5 tons/hour	N/A
07-205	VTBC16	LINE C16 & C18 VACUUM RECEIVER	None	Filter	6 tons/hour	N/A
07-206	BF-BPTL	BULK POWDER TRUCK LOADING STATION #2	None	None	12.5 tons/hour	N/A
07-207	MM1	MOLDING MACHINES 7, 8 & 9	None	None	less than 100 lb/hr	N/A
07-208	EXT7	MOLDING MACHINE #10. MINI EXTRUDERS #7 & #8.	None	None	less than 100 lb/hr	N/A
07-208	EXT8	EXTRUDER 10 LAB SCALE EXTRUDER	None	None	less than 100 lb/hr	N/A
07-250	DC0101F	LINE 25 HRG ROOF HOPPER CONSERVATION VENT	None	None	0.83 tons/hour	N/A
07-251	L25MH	LINES 23, 24 & 25 SAN C8707 ROOF HOPPER CARTRIDGE FILTER	None	Filter	1.66 tons/hour	N/A
07-252	SGH	LINES 23, 24 & 25 SAN GEL HOPPER CARTRIDGE FILTER	None	Filter	1.66 tons/hour	N/A
07-255	L25RH	LINE 25 RECYCLE HOPPER CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A
07-256	HSH1	LINE 25 ROTOCLONE	None	L25 ROTO	less than 100 lb/hr	N/A
07-256	HSH2	L25 CONCENTRATE FEEDER	None	L25 ROTO	less than 100 lb/hr	N/A
07-256	L25 FTC	L25 FEED THROAT HOPPER V-05-01	None	L25 ROTO	less than 100 lb/hr	N/A
07-256	L25 HF	L25 HRG FEEDER LW-04-04	None	L25 HRG FC L25 ROTO	less than 100 lb/hr	N/A
07-264	L25-HRG2	LINE 25 HRG ROOF HOPPER CONSERVATION VENT	None	None	0.83 tons/hour	N/A
07-266	C20-DHV	LINE C20 EXTRUDER AND DIE VENT	None	None	2.5 tons/hour	N/A
07-267	C20VP-Z5/7	LINE C20 VACUUM VENT	None	None	2.5 tons/hour	N/A
07-268	C20VACTB	LINES C20 & C22 RESIN RECEIVER BAG HOUSE	None	Filter	6.75 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
07-270	BSANSBV	C29355 SAN SILO CONSERVATION VENT	None	None	6.75 tons/hour	N/A
07-271	BSANSILODC	C29355 SAN SILO RECEIVER	None	Filter	6.75 tons/hour	N/A
07-272	BSAN-HV	C29355 SAN ROOF HOPPER CONSERVATION VENT	None	None	6.75 tons/hour	N/A
07-273	BSAN-HDC	C29355 SAN ROOF HOPPER RECEIVER	None	None	6.75 tons/hour	N/A
07-274	HRGL25DC	LINE 25 ROOF HOPPER RECEIVER	None	None	2.75 tons/hour	N/A
07-275	L23-25SHV	C29355 SAN SILO ROTARY VALVE VENT FILTER	None	None	6.75 tons/hour	N/A
07-276	CPF OQ	CPF OQ ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-277	C22 OQ	LINE C22 EXTRUDER AND DIE VENT	None	None	4.25 tons/hour	N/A
07-278	C22 OQ SS	LINE C22 SUPER SACK FILLING STATION	None	None	4.25 tons/hour	N/A
07-279	L27-29FV	LINES 27, 28 & 29 FEEDER ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-280	LC22VAC	LINE C22 VACUUM VENT	None	None	4.25 tons/hour	N/A
07-281	LC22R	LINE C22 ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-282	PB2-RHB	POWDER BAGGER #2 ROOF HOPPER BAGHOUSE	None	Filter	8.33 tons/hour	N/A
07-283	KM330DSR	KM330 DUMP STATION ROTOCLONE (LINES 12, 14, 15, 20 & 30)	None	ROTO	less than 100 lb/hr	N/A
07-286	L10-17RSYS	LINES 10 THRU 17 & C16 BULK HOPPER #1 ROTOCLONE SYSTEM	None	ROTO	less than 100 lb/hr	N/A
07-287	LC14RHVRB	LINE C14 ROOF HOPPER VACUUM RECEIVER BLOWER	None	Filter	6 tons/hour	N/A
07-289	L23/24SHCF	LINES 23 & 24 SAN GEL C0896 HOPPER CARTRIDGE FILTER	None	Filter	0.4 tons/hour	N/A
07-290	L27H2CF	LINE 27 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A
07-292	L28SRUVH	LINE 28 STARTUP/RECYCLE UV HOPPER CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A
07-293	L28SRNUVH	LINE 28 STARTUP/RECYCLE NON-UV HOPPER CARTRIDGE FILTER	None	Filter	4.25 tons/hour	N/A
07-295	L10BH1CF	LINE #10 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	1.25 tons/hour	N/A
07-296	L11BH1CF	LINE #11 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-297	L11BH2CF	LINE #11 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-298	L14BH2	LINE #14 BULK HOPPER #2 BAG HOUSE	None	Filter	2.5 tons/hour	N/A
07-299	L10/11BHR	LINE #10 & 11 BULK HOPPERS RECEIVER	None	Filter	3 tons/hour	N/A
07-300	L14BH2CF	LINE #14 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	1.5 tons/hour	N/A
07-301	LC7BH1CF	LINE C7 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	0.45 tons/hour	N/A

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
07-302	LC7BH2CF	LINE C7 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	0.45 tons/hour	N/A
07-304	L25BH2CF	LINE #25 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	2.75 tons/hour	N/A
07-305	L21BH2CF	LINE #21 BULK HOPPER #2 CARTRIDGE FILTER	None	Filter	2.5 tons/hour	N/A
07-306	L20BH1CF	LINE #20 BULK HOPPER #1 CARTRIDGE FILTER	None	Filter	1.75 tons/hour	N/A
07-307	S71TSDC	SILO 71 TRANSFER SYSTEM DUST COLLECTOR	None	N/A	32.5 tons/hour	N/A
07-308	S67TSDC	SILO 67 TRANSFER SYSTEM DUST COLLECTOR	None	N/A	32.5 tons/hour	N/A
07-309	L30SR754H1	LINE 30 STARTUP/RECYCLE 754 HOPPER 1	None	Filter	3.25 tons/hour	N/A
07-310	L30SR754H2	LINE 30 STARTUP/RECYCLE 701 HOPPER 2	None	Filter	3.25 tons/hour	N/A
07-332	BTLS1SV	BULK TRUCK LOADING STATION #1 SILO VENT	None	None	7.5 tons/hour	N/A
07-349	S/R DC SB	STARTUP/RECYCLE DUST COLLECTOR SPARE BLOWER	None	Filter	6 tons/hour	N/A
07-350	SILO SH1	RESIN SILO SHEET 1	None	Filter	12.5 tons/hour	N/A
07-351	SILO SH3	RESIN SILO SHEET 3	None	Filter	12.5 tons/hour	N/A
07-357	ROTOCL	L30-31 CARBON BLACK ROTOCLONE	None	ROTO	less than 100 lb/hr	N/A
07-352	SILO 72	RESIN SILO 72	None	Filter	25 tons/hour	N/A
07-353	10FD-C2-03	C2 BIN VENT A	None	Filter	0.5 tons/hour	N/A
07-354	10FD-C2-04	C2 BIN VENT B	None	Filter	0.5 tons/hour	N/A
07-355	10FDS73-01	SILO 73 BIN VENT	None	Filter	20 tons/hour	N/A
07-358	R SILO 74	RESIN SILO 74 BIN VENT	None	Filter	35.00 tons/hour	N/A
07-359	S74DTDCEB	SILO 74 DIRECT TRANSFER DUST COLLECTOR EXHAUST BLOWER	None	Filter	0.5 tons/hour	N/A
07-360	10-GB-BL-0	SILO 74 TRUCK 1 LOADING COLLECTOR EXHAUST BLOWER	None	Filter	1.00 tons/hour	N/A
07-361	10FDL1401	PPP/BP Dust Collector	None	Filter	2.00 tons/hour	2007
07-362	10-FC-S75-01	SILO 75 BIN VENT	None	Filter	25.00 tons/hour	2013

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

J.1.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission units SILO 67, SILO 68, SILO 69, M&N DUST, SP1-BF, SPA-BF, SPB-BF, SILO 57 RH, SILO 58 RH, L-28 RH, L-27 RH, L-26 RH, L-25 RH, L-24 RH, L-23 RH, L-22 RH, L-21 RH, L-20 RH, SILO 59 RH, SILO 60 RH, SILO 61 RH, SILO 62 RH, L-10 BV, L-11 BV, L-13 BV, L-14 BV, L16ED, L-15 RH, L-16 RH, L-17 RH, L13ED, L17ED, L15ED, L14ED, L27ED, L10ED, L11ED, L12ED, L26ED, L24ED, L23ED, L25ED, L22ED, L21ED, L20ED, SILO 64, SILO 65, SILO 66, SP2-BF, SP3-BF, L28ED, L29ED, L30ED, L31ED, L-29 RH, L-30 RH, L-31 RH, and from the emission units included in Conditions G.2.1, G.3.1, H.2.1, I.1.1, and I.3.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, H.2.1, I.1.1, I.2.1, I.3.1 and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

J.1.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the following emission units listed in the table below shall not exceed the calculated rates given in pounds per hour determined by use of the following equation:

Interpolation of the data for the process weight rates up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10\ P^{0.67}$$

Where:

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0\ P^{0.11} - 40$$

Where:

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
07-148	SILO 67	32.5	40.7
07-149	SILO 68	32.5	40.7
07-156	SILO 69	32.5	40.7
07-157	SILO 70	32.5	40.7
07-188	SILO 71	32.5	40.7
07-015	L-20 PB	1.75	5.97
07-016	L-21 PB	2.50	7.58

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
07-017	M&N DUST	0.63	3.01
07-018	L-22 PB	2.30	7.16
07-019	L-23 PB	1.13	4.45
07-020	L-24 PB	2.48	7.53
07-022	L-25 PB	2.75	8.07
07-023	SP1-BF	3.50	9.49
07-024	SPA-BF	7.50	15.8
07-025	L-26PR	1.75	5.97
07-026	L-27PB	4.25	10.8
07-027	L-28PB	4.25	10.8
07-028	L-29PB	4.25	10.8
07-029	SPB-BF	7.50	15.8
07-030	L-30PB	3.25	9.03
07-031	L-31PB	3.25	9.03
07-032	SILO 57 RH	32.50	40.7
07-033	SILO 58 RH	32.50	40.7
07-034	L-28 RH	4.25	10.8
07-035	L-27 RH	4.25	10.8
07-036	L-26 RH	1.75	5.97
07-037	L-25 RH	2.75	8.07
07-038	L-24 RH	2.75	8.07
07-039	L-23 RH	1.25	4.76
07-040	L-22 RH	2.50	7.58
07-041	L-21 RH	2.50	7.58
07-042	L-20 RH	1.75	5.97
07-043	SILO 59RH	32.50	40.7
07-044	SILO 60 RH	32.50	40.7
07-045	SILO 61 RH	32.50	40.7
07-046	SILO 62 RH	32.50	40.7
07-049	L-10 BV	1.25	4.76
07-050	L-11 BV	1.75	5.97
07-051	L-12 BV	1.25	4.76
07-052	L-13 BV	0.55	2.75
07-053	L-14 BV	1.50	5.38
07-054	L16ED	0.75	3.38
07-055	L-15 RH	1.50	5.38
07-056	L-16 RH	0.75	3.38
07-057	L-17 RH	0.75	3.38
07-059	L13ED	0.55	2.75
07-060	L17ED	0.75	3.38
07-061	L15ED	1.50	5.38
07-062	L14ED	1.50	5.38
07-063	L27ED	4.25	10.8
07-064	L10 ED	1.25	4.76
07-065	L11ED	1.75	5.97
07-066	L12ED	1.25	4.76
07-067	L26ED	1.75	5.97
07-071	L22ED	2.50	7.58
07-072	L21ED	2.50	7.58
07-073	L20ED	1.75	5.97
07-075	PBAGGER 1	7.50	15.8
07-079	PDC-C	0.55	2.75
07-080	PDC-D	0.55	2.75
07-086	REC FIL E	8.35	17.0

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
07-087	REC FIL F	8.35	17.0
07-092	L10EVP	1.25	4.76
07-092	L11EVP	1.75	5.97
07-092	L15EVP	1.50	5.38
07-092	L17EVP	0.75	3.38
07-094	SILO 63	32.50	40.7
07-095	SILO 64	32.50	40.7
07-096	SILO 65	32.50	40.7
07-097	SILO 66	32.50	40.7
07-098	TRUCK FIL	7.50	15.8
07-099	SP2-BF	3.50	9.49
07-100	SP3-BF	3.50	9.49
07-101	L28ED	4.25	10.8
07-104	VPL-29	4.25	10.8
07-104	VPL-30	3.25	9.03
07-104	VPL-31	3.25	9.03
07-105	L29ED	4.25	10.8
07-106	L30ED	3.25	9.03
07-107	L31ED	3.25	9.03
07-108	L-29 RH	4.25	10.8
07-109	L-30 RH	3.25	9.03
07-110	L-31 RH	3.25	9.03
07-115	CVSA	1.25	4.76
07-116	CVSB	1.25	4.76
07-117	REC FIL G	8.35	17.0
07-119	SAVS	0.25	1.62
07-120	DC-6	1.50	5.38
07-121	20-S-C9-02	7.20	15.4
07-122	10-S-10NPI	0.9	3.82
07-123	C14/16 ROT	3.75	9.94
07-126	LC2D	0.70	3.23
07-127	LC1D	0.90	3.82
07-127	LC3D	0.90	3.82
07-128	LC5D	0.90	3.82
07-128	LC7D	0.45	2.40
07-130	LC14D	1.25	4.76
07-131	LC14V	1.25	4.76
07-131	LC16V	2.50	7.58
07-131	LC18V	2.50	7.58
07-132	WCV	1.25	4.76
07-135	VTBC14	3.75	9.94
07-137	BVC1	0.75	3.38
07-137	BVC3	0.30	1.83
07-137	BVC5	0.45	2.40
07-137	BVC7	0.45	2.40
07-139	BVC2	0.70	3.23
07-150	L-14PPC	1.50	5.38
07-153	VDCS	12.50	22.3
07-154	FGHJ VDC	12.50	22.3
07-159	LC16D	2.50	7.58
07-159	LC18D	2.50	7.58
07-161	SS1 BV	1.35	5.01
07-162	SAN-RH	1.35	5.01
07-163	ASC HCF	0.75	3.38
07-164	L23/24 SH	1.35	5.01

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
07-166	HRG UL DC	3.50	9.49
07-167	HRG S1C	2.00	6.52
07-168	HRG S2C	2.00	6.52
07-169	HRG SILO 1	2.00	6.52
07-170	HRG SILO 2	2.00	6.52
07-171	HRG S1 DRV	2.00	6.52
07-172	HRG S2 DRV	2.00	6.52
07-173	HRG L23/24	2.10	6.74
07-175	HRG 23/241	2.10	6.74
07-176	HRG 23/242	2.10	6.74
07-180	RL23	1.25	4.76
07-182	RL24	2.75	8.07
07-185	C3EVP	0.30	1.83
07-186	C5EVP	0.45	2.40
07-192	RPDH	0.65	3.07
07-194	RGT/CRG	25.00	35.4
07-197	BCB	6.00	13.6
07-199	L25/26XTH	4.50	11.2
07-200	L30/31B2RH	6.50	14.4
07-201	L28/29B2RH	8.50	17.2
07-202	L30CDC	3.25	9.03
07-204	10-S-06	3.50	9.49
07-205	VTBC16	6.00	13.6
07-206	BF-BPTL	12.50	22.3
07-250	DC0101F	0.83	3.62
07-251	L25MH	1.66	5.76
07-252	SGH	1.66	5.76
07-255	L25RH	2.75	8.07
07-264	L25-HRG2	0.83	3.62
07-266	C20-DHV	2.50	7.58
07-267	C20VP-Z5/7	2.50	7.58
07-268	C20VACTB	6.75	14.7
07-270	BSANSBV	6.75	14.7
07-271	BSANSILODC	6.75	14.7
07-272	BSAN-HV	6.75	14.7
07-273	BSAN-HDC	6.75	14.7
07-274	HRGL25DC	2.75	8.07
07-275	L23-25SHV	6.75	14.7
07-277	C22 OQ	4.25	10.8
07-278	C22 OQ SS	4.25	10.8
07-280	LC22VAC	4.25	10.8
07-282	PB2-RHB	8.33	17.0
07-287	LC14RHVRB	6.00	13.6
07-289	L23/24SHCF	0.40	2.22
07-290	L27H2CF	4.25	10.8
07-292	L28SRUVH	4.25	10.8
07-293	L28SRNUVH	4.25	10.8
07-295	L10BH1CF	1.25	4.76
07-296	L11BH1CF	1.75	5.97
07-297	L11BH2CF	1.75	5.97
07-298	L14BH2	2.50	7.58
07-299	L10/11BHR	3.00	8.56
07-300	L14BH2CF	1.50	5.38
07-301	LC7BH1CF	0.45	2.40

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
07-302	LC7BH2CF	0.45	2.40
07-304	L25BH2CF	2.75	8.07
07-305	L21BH2CF	2.50	7.58
07-306	L20BH1CF	1.75	5.97
07-307	S71TSDC	32.50	40.7
07-308	S67TSDC	32.50	40.7
07-309	L30SR754H1	3.25	9.03
07-310	L30SR754H2	3.25	9.03
07-332	BTLS1SV	7.50	15.8
07-349	S/R DC SB	6.00	13.6
07-350	SILO SH1	12.50	22.3
07-351	SILO SH3	12.50	22.3
07-352	SILO 72	25.00	35.4
07-353	10FD-C2-03	0.50	2.58
07-354	10FD-C2-04	0.50	2.58
07-355	10FDS73-01	20.00	30.5
07-358	R SILO 74	35.00	41.30
07-359	S74DTDCEB	0.50	2.58
07-360	10-GB-BL-0	1.00	4.10
07-361	10FDL1401	2.00	6.52
07-362	10-FC-S75-01	25.00	35.4

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from MM1, EXT7, EXT8, CMH, CMM1, CMM2, CMM3, CMEX, MM4, MM5, MM6, QAFOH, QAAH, QA SP HOOD, 20-M-C1-01, 20-M-C10-1, 20-M-C2-01, 20-M-C3-01, 20-M-C7-01, 20-M-C8-01, L30AF-BV, L30FT BV, HSH1, HSH2, L25 FTC, L25 HF, CPF OQ, L27-29FV, LC22R, KM330DSR, L10-17RSYS, and ROTOCL shall not exceed 0.551 pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

J.1.3 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with J.1.2, the integral device associated with facilities SAVS, DC-6, 10-S-10NPI, 20-M-C10-1, 20-M-C8-01, 20-M-C2-01, 20-M-C1-01, 20-M-C3-01, 20-M-C5-01, 20-M-C7-01, L-20 PB, L-21 PB, M&N DUST, L-22 PB, L-23 PB, L-24 PB, L-25 PB, SILO 57 RH, SILO 58 RH, L-28 RH, L-27 RH, L-26 RH, L-25 RH, L-24 RH, L-23 RH, L-22 RH, L-21 RH, L-20 RH, SILO 59RH, SILO 60 RH, SILO 61 RH, SILO 62 RH, L-10 BV, L-11 BV, L-12 BV, L-13 BV, L-14 BV, L-15 RH, L-16 RH, L-17 RH, PBAGGER 1, PDC-C, PDC-D, REC FIL E, REC FIL F, SILO 63, SILO 64, SILO 65, SILO 66, TRUCK FIL, SP2-BF, SP3-BF, L-29 RH, L-30 RH, L-31 RH, CVSA, CVSB, REC FIL G, VTBC14, SILO 67, SILO 68, L-14PPC, SILO 69, SILO 70, SS1 BV, SAN-RH, ASC HCF, L23/24 SH, HRG UL DC, HRG S1C, HRG S2C, HRG L23/24, RL23, RL24, SILO 71, RPDH, RGT/CRG, CMH, BCB, L25/26XTH, L30/31B2RH, L28/29B2RH, L30CDC, 10-S-06, VTBC16, L25MH, SGH, L25RH, C20VACTB, BSANSILODC, LC14RHVRB, L23/24SHCF, L27H2CF, L28SRUVH, L28SRNUVH, L10BH1CF, L11BH1CF, L11BH2CF, L14BH2, L10/11BHR, L14BH2CF, LC7BH1CF, LC7BH2CF, L25BH2CF, L21BH2CF, L20BH1CF, L30SR754H1, L30SR754H2, S/R DC SB, SILO SH1, SILO SH3, SILO 72, L25 HF, HSH2, L25 FTC, HSH1, L30AF-BV, L30FT BV, CPF OQ, L27-29FV, LC22R, KM330DSR, L10-17RSYS, ROTOCL, 10FD-C2-03, 10FD-C2-04, 10FDS73-01, R SILO 74, S74DTDCEB, 10-GB-BL-0, 10FDL1401 and 10-FC-S75-01 shall be in operation at all times that material is being transferred into the facility.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

J.1.4 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust for emission units L-27PB, L-28PB, L-29PB, L-28 RH, L-27 RH, L27ED, L28ED, VPL-29, L29ED, L-29 RH, C22 OQ, LC22VAC, L27H2CF, L28SRUVH, L28SRNUVH, L25/26XTH, BCB, VTBC16, LC14RHVRB, S/R DC SB, L30/31B2RH, C20VACTB, BSANSBV, BSANSILODC, BSAN-HV, BSAN-HDC, L23-25SHV, 20-S-C9-02, SPA-BF, SPB-BF, PBAGGER 1, TRUCK FIL, BTLS1SV, PB2-RHB, REC FIL E, REC FIL F, REC FIL G, L28/29B2RH, VDCS, FGHJ VDC, BF-BPTL, SILO SH1, SILO SH3, RGT/CRG, SILO 72, SILO 67, SILO 68, SILO 69, SILO 70, SILO 71, SILO 57 RH, SILO 58 RH, SILO 59RH, SILO 60 RH, SILO 61 RH, SILO 62 RH, SILO 63, SILO 64, SILO 65, SILO 66, S71TSDC, S67TSDC, 10FDS73-01, R SILO 74 and 10-FC-S75-01 shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from the filter associated with L-27PB, L-28PB, L-29PB, L-28 RH, L-27 RH, L27ED, L28ED, VPL-29, L29ED, L-29 RH, C22 OQ, LC22VAC, L27H2CF, L28SRUVH, L28SRNUVH, L25/26XTH, BCB, VTBC16, LC14RHVRB, S/R DC SB, L30/31B2RH, C20VACTB, BSANSBV, BSANSILODC, BSAN-HV, BSAN-HDC, L23-25SHV, 20-S-C9-02, SPA-BF, SPB-BF, PBAGGER 1, TRUCK FIL, BTLS1SV, PB2-RHB, REC FIL E, REC FIL F, REC FIL G, L28/29B2RH, VDCS, FGHJ VDC, BF-BPTL, SILO SH1, SILO SH3, RGT/CRG, SILO 72, SILO 67, SILO 68, SILO 69, SILO 70, SILO 71, SILO 57 RH, SILO 58 RH, SILO 59RH, SILO 60 RH, SILO 61 RH, SILO 62 RH, SILO 63, SILO 64, SILO 65, SILO 66, S71TSDC, S67TSDC, 10FDS73-01, R SILO 74 and 10-FC-S75-01 the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

J.1.5 Record Keeping Requirements

(a) To document the compliance status with Condition J.1.4, the Permittee shall maintain the weekly record of the visible emission notations required by Condition J.1.4(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(b) All records required to be maintained by Condition J.1.5 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Section J consists of the following Sections: J.1.

Condition J.1.5 concludes the Section J requirements of this permit

#: LEXAN is a trademark of SABIC Innovative Plastics IP BV
#: ULTEM is a trademark of SABIC Innovative Plastics IP BV

SECTION K.1 EMISSIONS UNIT OPERATION CONDITIONS

BEFORE Shutdown of BW-BOILER and E BOILER

Emissions Unit Description:

<u>Boilerhouse I Affected Facilities/Sources</u>

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) standards that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source subject to the applicable regulation.

(a) The Boilerhouse I area includes boilers that are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as: E BOILER, BW-BOILER, and R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to the E BOILER, BW-BOILER, and R BOILER are specified in Section D of this permit.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

K.1.1 BEFORE Shutdown of BW-BOILER and E BOILER - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Instituation Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD specified in Section D.1 of the permit apply to the E BOILER, BW-BOILER, and R BOILER.

SECTION K.1 AFTER Shutdown of the BW-BOILER and E BOILER

Emissions Unit Description:

Boilerhouse I Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) standards that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source subject to the applicable regulation.

(a) The Boilerhouse I area includes one boiler that is part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. This boiler is identified as: R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to R BOILER is specified in Section D of this permit.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

K.1.1 AFTER Shutdown of the BW-BOILER and E BOILER National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Instituation Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD specified in Section D.1 of the permit apply to the R BOILER.

SECTION K.2 EMISSIONS UNIT OPERATION CONDITIONS- BEFORE Shutdown of BW-BOILER and E BOILER

Emissions Unit Description: Boilerhouse I

BH I Boilers

(b) The boilers located in the Boilerhouse I Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit[d][e]	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
09-001	BW-BOILER	B&W BOILER natural gas-fired with/without supplemental hydrogen	None	None	173 MMBtu/hr	1975
09-002	E BOILER	ERIE BOILER coal fired	BHI Baghouse	None	249 MMBtu/hr	1975
09-106	R BOILER	RILEY BOILER natural gas fired	None	None	178.5 MMBtu/hr	1969

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) E BOILER, BW-BOILER and R BOILER may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a gas chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use the E BOILER, BW BOILER, or R BOILER for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either ~~an~~ COS Oxidizer (08-706) or COS Flare (08-707). The COS Oxidizer and COS Flare are described in Section I of this permit. The COS Flare (08-707) serves only as back-up to the COS Oxidizer (08-706) or during safety interlock of the system.

(e) E BOILER, BW-BOILER, and R BOILER are used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to either the E BOILER or R BOILER for control. After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

SECTION K.2 EMISSIONS UNIT OPERATION CONDITIONS- AFTER Shutdown of BW-BOILER and E BOILER

Emissions Unit Description: Boilerhouse I

BH I Boilers

(b) The boiler located in the Boilerhouse I is identified as an emissions unit below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit[(d)(e)]	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
09-106	R BOILER	RILEY BOILER natural gas fired	None	None	178.5 MMBtu/hr	1969

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).
(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) R BOILER may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a gas chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use R BOILER for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either a COS Oxidizer (08-706) or COS Flare (08-707). The COS Oxidizer and COS Flare are described in Section I of this permit. The COS Flare (08-707) serves only as back-up to the COS Oxidizer (08-706) or during safety interlock of the system.

(e) R BOILER is used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to R BOILER for control. After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

(a) Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the boilers identified as E BOILER, BW-BOILER, or R BOILER, and the COS Vent Oxidizer and COS Flare listed in Condition I.2.1.

(1) The total sulfur input to E BOILER (stack no. 09-002) and the carbon monoxide generators listed in Condition I.2.1(a) shall not exceed 2,536.75 tons in any 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

*Daily Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke) + Daily Coal Usage * (wt% Sulfur of Coal)*

(2) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour or the rate determined in the most recent stack test of the E BOILER such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of this Part 70 permit) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

Compliance with these conditions and Conditions G.2.1(a) and I.2.1 will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons per year each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

(b) Pursuant to CP 129-5500-00002, Condition 12, issued on September 30, 1996, the operating capacity of the E BOILER shall be limited to 325,000 pounds of steam per hour.

Compliance with this steam production limit and the sulfur dioxide and nitrogen oxide limits for boilers H-530A and H-530B pursuant to Condition E.4.1, limits the net increase in sulfur dioxide emissions and nitrogen oxide emissions to below 40 tons per year and renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

(a) Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to R BOILER; COS Vent Oxidizer, and COS Flare listed in Condition I.2.1.

(1) [RESERVED]

(2) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of

this Part 70 permit) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

Compliance with these conditions and Conditions G.2.1(a) and I.2.1 will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons per year each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

(b) Compliance with this steam production limit and the sulfur dioxide and nitrogen oxide limits for boilers H-530A and H-530B pursuant to Condition E.4.1, limits the net increase in sulfur dioxide emissions and nitrogen oxide emissions to below 40 tons per year and renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.2 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

Whenever the C-41 and C-42 coating processes are operating and VOC emissions are vented to any of the three (3) boilers identified as the E BOILER, R BOILER, and BW-BOILER, as described in Section L of this permit, such boiler(s) shall maintain a minimum overall control efficiency of 81 % including capture and removal efficiencies. This control efficiency is required to limit the net emissions increase of VOC to less than 40 tons per 12 consecutive month period after the 1984 coating line construction.

Compliance with this Condition and the C-41 and C-42 production limitation as described in Condition L.2.1(a) is equivalent to 93 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the net emission increase below PSD significant emission levels. These conditions render the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.2 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

Whenever the C-41 and C-42 coating processes are operating and VOC emissions are vented to R BOILER, as described in Section L of this permit, the boiler shall maintain a minimum overall control efficiency of 81 % including capture and removal efficiencies. This control efficiency is required to limit the net emissions increase of VOC to less than 40 tons per 12 consecutive month period after the 1984 coating line construction.

Compliance with this Condition and the C-41 and C-42 production limitation as described in Condition L.2.1(a) is equivalent to 93 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the net emission increase below PSD significant emission levels. These conditions render the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.3 Volatile Organic Compounds (VOC) from S-4 and S-5 Coating Lines [326 IAC 8-2-5]

Whenever the S-4 or S-5 coating processes are operating and VOC emissions are vented to any of the three (3) boilers identified as the E BOILER, R BOILER, and BW-BOILER, as described in Section L of this permit, such boiler(s) shall maintain a minimum overall control efficiency of 70 % including capture and removal efficiencies. This control efficiency limits the emissions of VOC to

less than 2.9 pounds per gallon excluding water of coating, for coating delivered to the applicator of S-4 and S-5.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.3 Volatile Organic Compounds (VOC) from S-4 and S-5 Coating Lines [326 IAC 8-2-5]

Whenever the S-4 or S-5 coating processes are operating and VOC emissions are vented to R BOILER, as described in Section L of this permit, the boiler shall maintain a minimum overall control efficiency of 70 % including capture and removal efficiencies. This control efficiency limits the emissions of VOC to less than 2.9 pounds per gallon excluding water of coating, for coating delivered to the applicator of S-4 and S-5.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.4 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-1]

(a) Pursuant to 326 IAC 6-2-1(c), particulate emissions shall be limited to 0.80 pounds per MMBtu of heat input for R BOILER.

(b) Pursuant to 326 IAC 6-2-1(c), particulate emissions shall be limited to 0.42 pounds per MMBtu of heat input for E BOILER. This limitation was calculated using the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where

C = 50 ug/m3
Pt = emission rate limit (lbs/MMBtu)
Q = 827.5 MMBtu/hr
N = 5 stacks
a = plume rise factor (0.67)
h = 220 ft stack height

(c) Pursuant to CP 65-01-94-0206, Condition 4, issued on March 23, 1990 and 326 IAC 6-2-1(g), particulate emissions shall be limited to 0.35 pounds per MMBtu of heat input for BW-BOILER.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.4 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-1]

(a) Pursuant to 326 IAC 6-2-1(c), particulate emissions shall be limited to 0.80 pounds per MMBtu of heat input for R BOILER.

(b) [RESERVED]

(c) [RESERVED]

BEFORE Shutdown of E BOILER

K.2.5 Sulfur Dioxide (SO2) [326 IAC 7-1.1]

(a) [RESERVED]

(b) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the SO2 emissions from the E BOILER shall not exceed 6.0 pounds per million Btu (lbs/MMBtu).

Condition K.2.5 shall cease to apply after the shutdown of E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.5 Sulfur Dioxide (SO2) [326 IAC 7-1.1] [RESERVED]

K.2.6 [Reserved]

Compliance Determination Requirements

BEFORE Shutdown of BW-BOILER and E BOILER
K.2.7 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the boilers identified as E BOILER, BW-BOILER, or R BOILER, and the COS Vent Oxidizer and COS Flare identified in Condition I.2.1.

(a) In order to comply with Condition K.2.1(a)(2), at least one of the control devices used for organic sulfide control (E BOILER, BW-BOILER, or R BOILER, or the COS Vent Oxidizer or COS Flare described in Section I) shall be in operation and control organic sulfide emissions from the COS stream at all times that the carbon monoxide generators described in I.2.1 are in operation.

(b) To determine compliance with Condition K.2.1(a)(1):

(1) The sulfur content of the coal used by E BOILER shall be analyzed for each day the boiler operate; and

(2) The sulfur content of the coke used in the carbon monoxide generators described in Condition I.2.1 shall be analyzed as received (vendor delivery analysis may be used, approved by IDEM on 8/1/05) for each day the carbon monoxide generators operate.

(c) To determine compliance with Condition K.2.1(a)(2) and whenever the COS stream is vented to two or more of the three types of control devices permitted for use (boilers described in this section; or COS Vent Oxidizer and COS Flare as described in Section I) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the E BOILER equal:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the E BOILER) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of COS Vent Oxidizer as determined in the most recent stack test)*

(C) Daily VOC emissions from the COS Flare equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)*

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to two or more of the three types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by E BOILER, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the E BOILER, multiplied by the number of hours the organic sulfides were vented to the E BOILER; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the COS Flare, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.7 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to R BOILER; COS Vent Oxidizer and COS Flare identified in Condition I.2.1.

(a) In order to comply with Condition K.2.1(a)(2), at least one of the control devices used for organic sulfide control (R BOILER; COS Vent Oxidizer or COS Flare described in Section I) shall be in operation and control organic sulfide emissions from the COS stream at all times that the carbon monoxide generators described in I.2.1 are in operation.

(b) [RESERVED]

(c) To determine compliance with Condition K.2.1(a)(2) and whenever the COS stream is vented to two or more of the three types of control devices permitted for use (R BOILER described in this section; or COS Vent Oxidizer and COS Flare as described in Section I) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the R BOILER equal:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the R BOILER) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of COS Vent Oxidizer as determined in the most recent stack test)*

(C) Daily VOC emissions from the COS Flare equal:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)*

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to two or more of the three types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by R BOILER, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the R BOILER, multiplied by the number of hours the organic sulfides were vented to the R BOILER; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the COS Flare, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.8 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

To determine compliance with K.2.2, one or more of the three (3) boilers identified as the E BOILER, R BOILER, and BW-BOILER, shall operate at all times that the C-41 and C-42 coating lines, described in Section L of this permit, are operating while using VOC based coating.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.8 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

To determine compliance with K.2.2, R BOILER, shall operate at all times that the C-41 and C-42 coating lines, described in Section L of this permit, are operating while using VOC based coating.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.9 Volatile Organic Compounds (VOC) from S-4 and S-5 [326 IAC 8-2-5]

To determine compliance with K.2.3, one or more of the three (3) boilers identified as the E BOILER, R BOILER, and BW-BOILER, shall operate at all times that the S-4 and S-5 coating lines, described in Section L of this permit, are operating while using VOC based coating.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.9 Volatile Organic Compounds (VOC) from S-4 and S-5 [326 IAC 8-2-5]

To determine compliance with K.2.3, R BOILER, shall operate at all times that the S-4 and S-5 coating lines, described in Section L of this permit, are operating while using VOC based coating and the coating emissions are vented to the R BOILER.

BEFORE Shutdown of E BOILER

K.2.10 Particulate Control

To demonstrate compliance with Condition K.2.4, the baghouse on E BOILER, used for particulate control, shall be in operation and control particulate emissions from the E BOILER, at all times it is in operation except during startup when the temperature is below 250 degrees F. The baghouse bypass damper shall be operated in the closed position or in a position no more open than the position documented in accordance with a valid compliance demonstration conducted pursuant to Condition K.2.12(g).

Condition K.2.10 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER

K.2.10 [RESERVED]

BEFORE Shutdown of E BOILER

K.2.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

(a) [RESERVED]

(b) In order to demonstrate compliance with the SO2 limits pursuant to Condition K.2.5(b), the Permittee shall demonstrate, using a calendar month average, that the sulfur dioxide

emissions do not exceed the equivalent of six (6.0) pounds per MMBtu from the E BOILER when combusting coal. The Permittee may use one of the following methods pursuant to 326 IAC 7-2-1(e) and specified in 326 IAC 3-7:

(1) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data for E BOILER shall be collected as follows:

(A) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or

(B) Pursuant to 326 IAC 3-7-2(b)(2) and 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval, that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring; or

(C) The Permittee shall meet the minimum sampling requirements specified in 326 IAC 3-7-2(b)(3), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e).

(2) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Condition K.2.11 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.11 [RESERVED]

BEFORE Shutdown of BW-BOILER and E BOILER
K.2.12 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition K.2.1(a)(2), the Permittee shall perform VOC testing for E BOILER when organic sulfides are being vented to it using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years thereafter from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(b) If the Permittee chooses to control the COS stream using R BOILER and BW-BOILER, and in order to determine the minimum steam production rate necessary to ensure that organic sulfide emissions will not exceed 10.7 pounds per hour, or the rate determined in the most recent stack test conducted as required by Condition K.2.12(a), when using R BOILER or BW-BOILER for the destruction of organic sulfides as described in Condition K.2.1(a)(2), compliance stack tests shall be performed for organic sulfides on such boiler(s) upon venting the COS stream to such boiler(s) for the destruction of organic sulfides. These tests shall be performed within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. Testing shall be conducted in accordance with Section C- Performance Testing.

(c) If the Permittee makes any change or modification to the boilers R BOILER, BW-BOILER, and/or E BOILER to affect the conversion of organic sulfides, the Permittee shall perform a compliance stack test for organic sulfides within 60 days after achieving the maximum production rate but no later than 180 days after making such change or modification. The new organic sulfides emissions level determined by the compliance stack test shall, beginning ten (10) business days after OAQ receives the test report for the compliance stack test, be used by the Permittee to calculate compliance with the VOC emissions limit in Condition K.2.1(a)(2).

(d) [Reserved]

(e) 1) In order to demonstrate compliance with Condition K.2.4, the Permittee shall perform PM testing for R BOILER utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

2) If the Permittee chooses to control emissions from the COS stream or SHEETFUMES using the BW-BOILER, PM testing shall be performed for BW-BOILER utilizing methods as approved by the Commissioner. Testing shall be conducted within ninety (90) days of beginning to use the BW- BOILER for control of either the COS stream or SHEETFUMES. Testing shall be repeated at least once every five (5) years from the date of the most recent compliance demonstration.

(f) The Permittee shall perform VOC testing for BW-BOILER utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing, and shall be conducted within ninety (90) days of initial routing of the SHEETFUMES to BW-BOILER. This test shall be repeated at least once every five (5) years from the date of this compliance demonstration.

(g) In order to demonstrate compliance with Condition K.2.4, the Permittee shall perform PM testing for E BOILER utilizing methods as approved by the Commissioner. The Permittee shall document the baghouse bypass damper position during the performance test. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.12 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) [RESERVED]

(b) If the Permittee chooses to control the COS stream using R BOILER, and in order to determine the minimum steam production rate necessary to ensure that organic sulfide emissions will not exceed 10.7 pounds per hour when using R BOILER for the destruction of organic sulfides as described in Condition K.2.1(a)(2), compliance stack tests shall be performed for organic sulfides on R BOILER upon venting the COS stream to R BOILER for the destruction of organic sulfides. These tests shall be performed within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. Testing shall be conducted in accordance with Section C- Performance Testing.

(c) If the Permittee makes any change or modification to R BOILER to affect the conversion of organic sulfides, the Permittee shall perform a compliance stack test for organic sulfides within 60 days after achieving the maximum production rate but no later than 180 days after making such change or modification. The new organic sulfides emissions level determined by the compliance stack test shall, beginning ten (10) business days after OAQ receives the test report for the compliance stack test, be used by the Permittee to calculate compliance with the VOC emissions limit in Condition K.2.1(a)(2).

(d) [Reserved]

(e) 1) In order to demonstrate compliance with Condition K.2.4, the Permittee shall perform PM testing for R BOILER utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

2) [RESERVED]

(f) [RESERVED]

(g) [RESERVED]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.13 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

(a) Whenever the COS stream is being vented to E BOILER to destroy organic sulfides:

(1) E BOILER shall operate at minimum steam production rate of 154,000 pounds per hour; and

(2) The Permittee shall monitor and record the steam production rate of E BOILER. Steam production rates shall be measured as block averages with the blocks to begin at midnight, 0300, 0600, 0900, 1200, 1500, 1800, and 2100 hours, and with each average to consist of at least ten measurements made during each block of time. When for any three (3) hour average reading (arithmetic average of three contiguous one-hour periods), the steam production rate is outside the established range in K.2.13(a)(1), the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from the limitation set forth in Condition K.2.1 of this permit.

(b) Whenever the COS stream is being vented to R BOILER and BW-BOILER to destroy organic sulfides, the R BOILER and BW-BOILER shall each operate at a minimum steam production rate needed to ensure that the organic sulfides emissions will not exceed 10.7 pounds per hour, or the rate determined in the most recent stack test conducted as required by Condition K.2.12(a), when the COS stream is vented to these boilers for destruction. The minimum steam production rates shall be determined during the stack test required by Condition K.2.12(b).

(c) Whenever the COS stream is being vented to the COS Vent Oxidizer or the COS Flare to destroy organic sulfides, Condition I.2.5 applies.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.13 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

(a) [RESERVED]

(b) Whenever the COS stream is being vented to R BOILER to destroy organic sulfides, the R BOILER shall operate at a minimum steam production rate needed to ensure that the organic sulfides emissions will not exceed 10.7 pounds per hour, or the rate determined in the most recent stack test conducted as required by Condition K.2.12(a), when the COS stream is vented to the boiler for destruction. The minimum steam production rate shall be determined during the stack test required by Condition K.2.12(b).

(c) Whenever the COS stream is being vented to the COS Vent Oxidizer or the COS Flare to destroy organic sulfides, Condition I.2.5 applies.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.14 Volatile Organic Compounds (VOC) from C-41, C-42, S-4 and S-5 [40 CFR 64]

Whenever the C-41, C-42, S-4 or S-5 coating lines, described in Section L of this permit, are operating using VOC-based coating and VOC emissions are vented to one or more of the E BOILER, R BOILER, and BW-BOILER, for control of VOC:

(a) Such boiler(s) shall each operate at a minimum combustion zone temperature of 1400°F, calculated as a rolling 3-hour average, or the temperatures established during the most recent stack test; and

(b) The Permittee shall monitor and record the combustion zone temperature of such boiler(s) at least once each hour. When for any three (3) hour average reading (arithmetic average of three consecutive one-hour operating periods), the temperature is below 1400°F or the temperatures established during the most recent stack test, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition K.2.2 and L.2.1(a) of this permit,or K.2.3 and L.2.4 of this permit,or all, as applicable. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) The Permittee shall monitor and record the boiler makeup air flowrate into the duct from Building 4 at least once every 15 minutes to demonstrate that the VOC captured by enclosures for the C-41, C-42, S-4 and S-5 coating operations is not bypassing to atmosphere. When for any three (3) hour average reading (arithmetic average of three consecutive one-hour operating periods), the flowrate is below 500 acfm, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition K.2.2 and L.2.1(a) of this permit, or K.2.3 and L.2.4 of this permit, or all, as applicable. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.14 Volatile Organic Compounds (VOC) from C-41, C-42, S-4 and S-5 [40 CFR 64]

Whenever the C-41, C-42, S-4 or S-5 coating lines, described in Section L of this permit, are operating using VOC-based coating and VOC emissions are vented to R BOILER for control of VOC:

(a) R BOILER shall operate at a minimum combustion zone temperature of 1400°F, calculated as a rolling 3-hour average, or the temperature established during the most recent stack test; and

(b) The Permittee shall monitor and record the combustion zone temperature of R BOILER at least once each hour. When for any three (3) hour average reading (arithmetic average of three consecutive one-hour operating periods), the temperature is below 1400°F or the temperatures established during the most recent stack test, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition K.2.2 and L.2.1(a) of this permit,or K.2.3 and L.2.4 of this permit,or all, as applicable. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) The Permittee shall monitor and record the boiler makeup air flowrate into the duct from Building 4 at least once every 15 minutes to demonstrate that the VOC captured by enclosures for the C-41, C-42, S-4 and S-5 coating operations is not bypassing to atmosphere. When for any three (3) hour average reading (arithmetic average of three consecutive one-hour operating periods), the flowrate is below 500 acfm, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition K.2.2 and L.2.1(a) of this permit, or K.2.3 and L.2.4 of this permit, or all, as applicable. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

K.2.15 [RESERVED]

BEFORE Shutdown of E BOILER

K.2.16 Continuous Opacity Monitoring [326 IAC 3-5] [40 CFR 64]

Pursuant to CP 129-5500-00002, Condition 11, as amended by Administrative Amendment A129-10164-00002 issued on January 22, 1999, and 40 CFR 64 a continuous monitoring system, which meets the performance specifications of 326 IAC 3-5-2, shall be calibrated, maintained, and operated for measuring opacity of the stack emissions from the E BOILER, except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks and zero and span adjustments. For purposes of 40 CFR 64, opacity monitoring via the COMS is an indicator of good operation and maintenance of the baghouse.

Condition K.2.16 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER

K.2.16 [RESERVED]

BEFORE Shutdown of E BOILER

K.2.17 COM Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) In the event of a continuous opacity monitor (COM) opacity exceeding thirty-five percent (35%) average opacity for three (3) consecutive six (6) minute averaging periods, reasonable response steps shall be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below thirty-five percent (35%).

(b) COM opacity readings in excess of thirty-five percent (35%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) The Permittee may request that the IDEM, OAQ approve a different opacity trigger level than the one specified in K.2.17(a) and (b), provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.

Condition K.2.17 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.17 [RESERVED]

BEFORE Shutdown of E BOILER
K.2.18 Method 9 Opacity Readings

(a) Whenever a COM is malfunctioning, the Permittee shall follow the procedures in accordance with Section C - Maintenance of Continuous Opacity Monitoring Equipment, until such time that the continuous opacity monitor is back in operation.

(b) Whenever a COM is malfunctioning, reasonable response steps shall be taken in accordance with Section C - Response to Excursions or Exceedances whenever the opacity from E BOILER, measured by Method 9, exceeds thirty-five percent (35%) for any three (3) consecutive six (6) minute average periods. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Condition K.2.18 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.18 [RESERVED]

BEFORE Shutdown of BW-BOILER
K.2.19 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the R BOILER and BW-BOILER stack exhaust shall be performed once per day during normal daylight operations when the boilers burn COS. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from R BOILER or BW-BOILER, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

AFTER Shutdown of BW-BOILER

K.2.19 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of R BOILER stack exhaust shall be performed once per day during normal daylight operations when the boilers burn COS. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhaust from R BOILER, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

BEFORE Shutdown of E BOILER

K.2.20 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across each baghouse used in conjunction with E BOILER at least once per day when these boilers are in operation and the baghouse is used to control emissions from such boilers. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 12.0 inches of water or a range established based upon stack test data, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site.

(c) The Permittee shall record the position of the baghouse bypass damper used in conjunction with E BOILER baghouse at least once per day when any of these boilers is in operation. A reading is not required if the Permittee welds the damper in the closed position or a car-seal is used, the damper position remains unchanged and is verified at the time the weld or car-seal is applied.

Condition K.2.20 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER

K.2.20 [RESERVED]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.21 Record Keeping Requirements

(a) To document the compliance status with Condition K.2.1(a) and K.2.7, the Permittee shall maintain the following records:

(1) The total daily sulfur input, and the 365-day rolling total of total daily sulfur input, to the E BOILER and carbon monoxide generators.

(2) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition K.2.7(c).

(3) Daily analyses of sulfur content of coal used by the E BOILER.

(4) Identity of each type of control device (boilers or, oxidizer or flare as described in Section I) to which the COS stream is vented for Organic Sulfide control and the amount of time during a calendar day that the type of control device is in use; except failure to maintain such records and calculating compliance pursuant to Condition K.2.7(c)(3) shall not be a deviation from this requirement.

(5) Three-hour block average steam production rate for E BOILER during periods when the COS stream is vented to the boiler for organic sulfide control.

(b) The Permittee shall maintain records of the instantaneous, integrated total steam loadings of the E BOILER to document compliance with Condition K.2.1(b).

(c) In order to document the compliance status with Conditions K.2.2, K.2.3, K.2.8, and K.2.9, the Permittee shall maintain:

(1) At least hourly, records of the combustion zone temperatures of any of the three (3) boilers, BW-BOILER, E BOILER, and R BOILER that are being used to control VOC emissions from C-41,C-42, S-4, or S-5.

(2) At least once every 15 minutes, records of the boiler makeup air flowrate into the duct from Building 4 to demonstrate that the VOC captured by enclosures for the C-41, C-42, S-4 and S-5 coating operations is not bypassing to atmosphere.

(d) To document the compliance status with the SO2 provisions in Conditions K.2.5 and K.2.11, the Permittee shall maintain records in accordance with (1) and (2) below.

(1) All fuel sampling and analysis data, pursuant to 326 IAC 7-2, and data collected in accordance with Condition K.2.11.

(2) Actual fuel usage since last compliance determination period.

(e) To document the compliance status with K.2.5(b), the Permittee shall use methods specified in 326 IAC 3-7-5(a) and develop a standard operating procedure (SOP) for E BOILER to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to Condition K.2.11(b). In addition any revision to the SOP shall be submitted to IDEM, OAQ.

(f) To document the compliance status with Conditions K.2.16 and K.2.17, the Permittee shall maintain records of the continuous opacity monitoring (COM) data specified in 326 IAC 3-5-6. Records shall be sufficient to establish compliance with the limits established in this section. When the COM system is not functioning, the Permittee shall maintain records of opacity readings of the stack exhaust conducted in accordance with Section C - Maintenance of Continuous Opacity Monitoring Equipment in order to document compliance with Condition K.2.16.

(g) To document the compliance status with Condition K.2.19, the Permittee shall maintain the daily record of the visible emission notations of the stack exhaust required by Condition K.2.19(a). When a daily record of normal or abnormal is not recorded, the Permittee shall maintain records of the reason(s) for the lack of a visible emission notation (e.g. the process did not operate that day or did not burn either oil or COS that day).

(h) To document the compliance status with Condition K.2.20, the Permittee shall maintain the records recorded once per day of the position of the baghouse bypass damper and of the pressure drop across the baghouse used in conjunction with E BOILER during normal operation. Daily records of the baghouse bypass damper position are not required on days for which the Permittee maintains the damper in the closed position by using a car-seal or by welding, provided that the Permittee has previously documented the damper position at the time the car-seal or weld is applied.

(i) All records required to be maintained by Condition K.2.21 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.21 Record Keeping Requirements

(a) To document the compliance status with Condition K.2.1(a) and K.2.7, the Permittee shall maintain the following records:

(1) The total daily sulfur input, and the 365-day rolling total of total daily sulfur input, to the carbon monoxide generators.

(2) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition K.2.7(c).

(3) [RESERVED].

(4) Identity of each type of control device (boiler, oxidizer, or flare as described in Section I) to which the COS stream is vented for Organic Sulfide control and the

amount of time during a calendar day that the type of control device is in use; except failure to maintain such records and calculating compliance pursuant to Condition K.2.7(c)(3) shall not be a deviation from this requirement.

(5) [RESERVED]

(b) [RESERVED]

(c) In order to document the compliance status with Conditions K.2.2, K.2.3, K.2.8, and K.2.9, the Permittee shall maintain:

(1) At least hourly, records of the combustion zone temperature of R BOILER when being used to control VOC emissions from C-41,C-42, S-4, or S-5.
(2) At least once every 15 minutes, records of the boiler makeup air flowrate into the duct from Building 4 to demonstrate that the VOC captured by enclosures for the C-41, C-42, S-4 and S-5 coating operations is not bypassing to atmosphere.

(d) [RESERVED]

(e) [RESERVED]

(f) [RESERVED]

(g) To document the compliance status with Condition K.2.19, the Permittee shall maintain the daily record of the visible emission notations of the stack exhaust required by Condition K.2.19(a). When a daily record of normal or abnormal is not recorded, the Permittee shall maintain records of the reason(s) for the lack of a visible emission notation (e.g. the process did not operate that day or did not burn either oil or COS that day).

(h) [RESERVED]

(i) All records required to be maintained by Condition K.2.21 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.22 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with Condition K.2.1(a)(2) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(b) To document the compliance status with Condition K.2.1(b), a quarterly report of any one-hour periods where the steam loading of E BOILER exceeded 325,000 pounds per hour shall be submitted using the deviation reporting forms located at the end of Section C of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(c) A quarterly report of opacity exceedances shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A report containing the information specified in 326 IAC 3-5-7 may be used to fulfill this requirement. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(d) A quarterly report of the calendar month average coal sulfur content, coal heat content, and sulfur dioxide emission rate in pounds per million Btus for E BOILER and the total monthly coal consumption shall be submitted using the reporting forms located at the end of Section K of the permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. [326 IAC 7-2-1(c)(2)]

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) The natural gas boiler certification shall be used for BW-BOILER. This certificate provides documentation of each time interval when the boiler is burning natural gas and visual emissions notations are not necessary for BW-BOILER. The natural gas boiler certification shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the six (6) month period being reported. The natural gas-fired boiler certification does require the certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(f) In order to document the compliance status with Condition K.2.16, reports shall be prepared as specified in 326 IAC 3-5-7(5). Reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

(1) Date of downtime.
(2) Time of commencement.
(3) Duration of each downtime.
(4) Reasons for each downtime.
(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(35).

(g) The Permittee shall submit the reports and records required by Condition K.2.22 to the address listed in Section C - General Reporting Requirements, of this permit.

(h) In accordance with 40 CFR 64, the Permittee shall submit monitoring reports for the boiler temperatures required to be monitored by Condition K.2.14(b) and the makeup air flowrate required to be monitored by Condition K.2.14(c). The reports shall be submitted at least every 6 months and include the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) If a QIP is required, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

Results of monitoring of boiler combustion zone temperatures, required by Condition K.2.14(b), and boiler makeup air inlet flowrate, required by Condition K.2.14(c), are not excursions and do not require excursion reporting if the results did not require response steps in accordance with Section C – Response to Excursions or Exceedances.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.22 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with Condition K.2.1(a)(2) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(b) [RESERVED]

(c) [RESERVED]

(d) [RESERVED]

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) [RESERVED]

(f) [RESERVED]

(g) The Permittee shall submit the reports and records required by Condition K.2.22 to the address listed in Section C - General Reporting Requirements, of this permit.

(h) In accordance with 40 CFR 64, the Permittee shall submit monitoring reports for the boiler temperatures required to be monitored by Condition K.2.14(b) and the makeup air flowrate required to be monitored by Condition K.2.14(c). The reports shall be submitted at least every 6 months and include the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) If a QIP is required, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

Results of monitoring of boiler combustion zone temperatures, required by Condition K.2.14(b), and boiler makeup air inlet flowrate, required by Condition K.2.14(c), are not excursions and do not require excursion reporting if the results did not require response steps in accordance with Section C – Response to Excursions or Exceedances.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION K.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Boilerhouse I

BH I Storage and Heat Exchange Operations

(c) The storage and heat exchange operations located in the Boilerhouse I Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
09-101	BH1 CTC1	COOLING TOWER #1 CELL A	None	None	N/A	N/A
09-102	BH1 CTC2	COOLING TOWER #1 CELL B	None	None	N/A	N/A
09-103	BH1 CTC3	COOLING TOWER #1 CELL C	None	None	N/A	N/A
09-104	BH1 CTC4	COOLING TOWER #1 CELL D	None	None	N/A	N/A
09-105	BH1 CTC5	COOLING TOWER #1 CELL E	None	None	N/A	N/A
09-107	PRV-TS	PRV TEST STAND	None	None	N/A	N/A
09-111	MG CTC3	COOLING TOWER CELL 3	None	None	N/A	N/A
09-112	GST VH4	UNLEADED GASOLINE TANK VH4	None	None	2.13 m^3	N/A
09-113	DST VH5	DIESEL STORAGE TANK VH5	None	None	2.13 m^3	N/A

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

K.3.1 [RESERVED]

K.3.2 Motor Vehicle Tampering, Engine Switching, and Fuel Switching [326 IAC 13-2.1-3]

Pursuant to 326 IAC 13-2.1-3(c), the Permittee shall not engage in fuel switching. This condition is not federally enforceable.

Section K consists of the following Sections: K.1, K.2, K.3, one (1) Part 70 Usage Reporting Form, three (3) Part 70 Quarterly Reporting Forms, and one (1) Part 70 Semi-Annual Natural Gas Fired Boiler Certification form.

Condition K.3.2 concludes the Section K requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section
Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Conditions G.2.1(a), I.2.1(b), and K.2.1(a)(2)
Facility: V-723, V-519, COS Stream
Parameter: VOC
Limit: 55 tons per 365-day period, rolled on a daily basis.

Year: _____**Month:** _____

Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365-day period	Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365-day period
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			No. of Deviations		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition K.2.5(b) - E BOILER
Facility: Vent 09-002, E BOILER
Parameter: SO_2
Limits: 6.0 lbs SO2 per million Btu heat input

Year: _____ **Quarter:** _____

Month	Coal Sulfur Content (%)	Coal Heat Content (Btu/lb)	Coal usage (tons/month)	SO_2 Emissions (lb/MMBTU)

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

After Shutdown of E BOILER, this form ceases to be applicable.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name:	SABIC Innovative Plastics Mt. Vernon, LLC
Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.:	T129-30384-00002
Facility:	BW-BOILER

☐	Natural Gas Only or Natural Gas with supplemental hydrogen only
☐	Alternate Fuel burned
From:	_____ To: _____

Submitted by:
Signature:
Printed Name:
Title/Position:
Phone:
Date:

After shutdown of BW-BOILER, this form ceases to be applicable.

SECTION L.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Structured Products, Building 4

Structured Products Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the entire affected source subject to the applicable regulation.

(a) Sp-PPPC is the affected source pursuant to 40 CFR 63, Subpart PPPP - National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products. In accordance with 40 CFR 63, Subpart PPPP, the following emissions units comprise the affected source, identified as Sp-PPPC, that is subject to 40 CFR 63, Subpart PPPP:

(1) All coating operations as defined in 40 CFR 63.4581 (plastic coating lines identified in Section L.2 of this permit as C-41 and C-42 are included in this affected source);
(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;
(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and
(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(b) Sp-POWC is the affected source pursuant to 40 CFR 63, Subpart JJJJ – National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating. The affected source, identified as Sp-POWC, comprises all web coating lines, as set forth in 40 CFR 63.3300. Web, as defined in 40 CFR 63.3310 means a continuous substrate which is flexible enough to be wound or unwound as rolls. Web coating lines identified in Section L.2 of this permit as S-4, S-5, and C-6, and film coating lines identified as C-45, C7A, C7B, and C8 are included in this affected source.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

L.1.1 General Provisions Relating to HAPs [326 IAC 20-1][40 CFR Part 63, Subpart A] [Table 2 to 40 CFR Part 63, Subpart PPPP] [40 CFR 63.4501]

The table that follows sets forth provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source Sp-PPPC, except as otherwise specified by Table 2 to 40 CFR Part 63, Subpart PPPP.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.6(e)(1)	Compliance with standards and maintenance requirements
63.6(f)(2-3)	Compliance with standards and maintenance requirements
63.8(b)	Monitoring requirements

L.1.2 National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products [326 IAC 20-81] [40 CFR Part 63, Subpart PPPP] [40 CFR 63.4481] [40 CFR 63.4482] [40 CFR 63.4483(b)] [40 CFR 63.4581]

(a) The provisions of 40 CFR Part 63, Subpart PPPP (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products) apply to the affected source, identified as Sp-PPPC. Pursuant to 40 CFR 63.4483(b), the Permittee must comply with these requirements on and after April 19, 2007, or such other compliance date authorized pursuant to 40 CFR 63.6. The following table provides specific requirements of 40 CFR 63, Subpart PPPP that apply to the affected source Sp-PPPC:

Applicable 40 CFR Part 63, Subpart PPPP Requirement	Regulatory Citation Description
63.4481(a)	Applicability Standards
63.4481(b)	Applicability Standards
63.4481(c)	Applicability Standards
63.4481(e)(1)	Applicability Standards
63.4482(a)	Applicability Standards
63.4482(b)	Affected Source
63.4482(e)	Affected Source
63.4483(b)	Compliance Date Requirements
63.4483(d)	Compliance Date Requirements
63.4580	Implementation and Enforcement of Subpart
63.4581	Definitions

(b) [RESERVED]

(c) In accordance with 40 CFR 63, Subpart PPPP, the following emissions units comprise the affected source, identified as Sp-PPPC, that is subject to 40 CFR 63, Subpart PPPP:
(1) All coating operations as defined in 40 CFR 63.4581;
(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(d) Terminology used in requirements established in this permit pursuant to 40 CFR 63, Subpart PPPP are defined in the CAA, in 40 CFR 63.2, and in 40 CFR 63.4581, and are applicable to the affected source Sp-PPPC.

L.1.3 General Provisions Relating to HAPs [326 IAC 20-1][40 CFR Part 63, Subpart A]

The table that follows sets forth provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source Sp-POWC, except as provided in Table 2 of 40 CFR 63, Subpart JJJJ.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.6(e)	Compliance with standards and maintenance requirements
63.6(f)	Compliance with standards and maintenance requirements
63.8(b)	Monitoring requirements

Compliance Determination Requirements

L.1.4 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]

The table that follows provides performance testing requirements of 40 CFR PART 63, Subpart A, General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source Sp-POWC, except as provided in Table 2 of 40 CFR 63, Subpart JJJJ.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.7(a)(2)	Performance testing requirements
63.7(a)(3)	Performance testing requirements
63.7(f)	Performance testing requirements - Use of an alternative test method
63.7(h)	Performance testing requirements - waiver of performance test

L.1.5 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]

The following table provides performance testing requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source Sp-PPPC, except as provided in Table 2 of 40 CFR 63, Subpart PPPP:

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.7(a)(3)	Administrator may require performance testing

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

L.1.6 Notification Requirements for Sp-PPPC [40 CFR 63.4510]

To comply with Condition L.1.2, the Permittee shall submit all of the notifications described in 40 CFR 63.4510, Subpart PPPP that apply to the affected source by the dates specified. These notifications include, but are not limited to, the following:

(a) General. The Permittee must submit the notifications in 40 CFR 63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) that apply to the affected source Sp-PPPC by the dates specified in those sections, except as provided in 40 CFR 63.4510(b) and (c).

The initial notification required by 40 CFR 63.4510(b) was submitted by the Permittee on April 5, 2005.

(b) Notification of compliance status. The Permittee must submit the notification of compliance status required by 40 CFR 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in 40 CFR 63.4540, 40 CFR 63.4550, or 40 CFR 63.4560 that applies to the affected source Sp-PPPC. The notification of compliance status must contain the information specified in 40 CFR 63.4510(c), paragraphs (1) through (11) and in 40 CFR 63.9(h).

L.1.7 Reporting Requirements

The notifications required by Condition L.1.6 shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notifications required by L.1.6 require the certification by the “responsible official” as defined by 326 IAC 2-7-1(35).

L.1.8 Record Keeping and Reporting Requirements for Sp-PPPC

(a) The table that follows provides the record keeping and reporting requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source Sp-PPPC, except as provided in Table 2 to 40 CFR 63, Subpart PPPP.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.5	Preconstruction review and notification requirements
63.9(a)	Notification requirements
63.9(b)	Notification requirements
63.9(h)	Notification requirements - Notification of compliance status
63.10(a)	Recordkeeping and reporting requirements - Applicability and general information
63.10(b)(1)	Recordkeeping and reporting requirements - General recordkeeping requirements
63.10(b)(3)	Recordkeeping and reporting requirements - General recordkeeping requirements
63.10(d)(1)	Recordkeeping and reporting requirements - General reporting requirements
63.12(c)	State authority and delegations
63.13(a)	Addresses of State air pollution control agencies and EPA Regional Offices
63.13(b)	Addresses of State air pollution control agencies and EPA Regional Offices

(b) All records required to be maintained by Condition L.1.8 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(c) The Permittee shall submit reports and records required to be submitted by Condition L.1.8 to the address listed in Section C - General Reporting Requirements, of this permit.

L.1.9 Record Keeping and Reporting Requirements for Sp-POWC

(a) The table that follows provides the record keeping and reporting requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source Sp-POWC, except as provided in Table 2 to 40 CFR 63, Subpart JJJJ.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.5	Preconstruction review and notification requirements
63.9(a)	Notification requirements
63.9(b)	Notification requirements

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
63.9(h)	Notification requirements - Notification of compliance status
63.10(a)	Recordkeeping and reporting requirements - Applicability and general information
63.10(b)	Recordkeeping and reporting requirements - General recordkeeping requirements
63.10(d)	Recordkeeping and reporting requirements - General reporting requirements
63.12(c)	State authority and delegations
63.13(a)	Addresses of State air pollution control agencies and EPA Regional Offices
63.13(b)	Addresses of State air pollution control agencies and EPA Regional Offices

(b) All records required to be maintained by Condition L.1.9 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(c) The Permittee shall submit reports and records required to be submitted by Condition L.1.9 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION L.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Structured Products, Building 4

Structured Products Operations

(c) The Structured Products operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
09-001; 09-002; and 09-106	SHEETFUMES*	COATING LINES - C-41, C-42, S-4, S-5	BEFORE Shutdown of BW-BOILER and E BOILER: BW-BOILER, E BOILER or R BOILER AFTER Shutdown of BW-BOILER and E BOILER: SHEETFUMES TO or R BOILER	None	N/A	N/A
10-086	OSFCA	C-45 FILM COATER	None	None	N/A	N/A
10-087	OSFCB		None	None	N/A	N/A
10-199	C42FMR	C-42 FMR COOLING ZONE	None	None	N/A	N/A
10-358	C7A	C7A PLASTIC FILM WEB COATING LINE	None	None	N/A	2005
10-359	C7B	C7B PLASTIC FILM WEB COATING LINE	None	None	N/A	2005
10-360	C8	C8 PLASTIC FILM WEB COATING LINE	None	None	N/A	2006
10-361	C-6	C-6 COATING LINE	None	None	N/A	N/A

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-010	EDV S5	EXTRUDER & DIE VENT S-5	None	None	1.70 tons/hour	N/A
10-011	EHV S4	EXTRUDER & DIE VENT S-4	None	None	1.23 tons/hour	N/A
10-012	EHV S3	EXTRUDER HEATER VENT S-3	None	None	0.33 tons/hour	N/A
10-013	EHV S1	EXTRUDER HEATER VENT S-1	None	None	0.20 tons/hour	N/A
10-014	PDH86	PELLET DRYING HOPPER 86	None	None	1.60 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-016	PDH84	PELLET DRYING HOPPER 84	None	None	1.60 tons/hour	N/A
10-015	PDH85	PELLET DRYING HOPPER 85	None	None	1.60 tons/hour	N/A
10-017	PDH83	PELLET DRYING HOPPER 83	None	None	1.60 tons/hour	N/A
10-018	PDH82	PELLET DRYING HOPPER 82	None	None	1.60 tons/hour	N/A
10-019	PDH81	PELLET DRYING HOPPER 81	None	None	1.60 tons/hour	N/A
10-020	PDH76	PELLET DRYING HOPPER 76	None	None	1.23 tons/hour	N/A
10-021	PDH75	PELLET DRYING HOPPER 75	None	None	1.23 tons/hour	N/A
10-022	PDH74	PELLET DRYING HOPPER 74	None	None	1.23 tons/hour	N/A
10-023	PDH73	PELLET DRYING HOPPER 73	None	None	1.23 tons/hour	N/A
10-024	PDH72	PELLET DRYING HOPPER 72	None	None	1.23 tons/hour	N/A
10-025	PDH71	PELLET DRYING HOPPER 71	None	None	1.23 tons/hour	N/A
10-026	PDH43	PELLET DRYING HOPPER 43	None	None	1.23 tons/hour	N/A
10-027	PDH45	PELLET DRYING HOPPER 45	None	None	1.23 tons/hour	N/A
10-028	PDH44	PELLET DRYING HOPPER 44	None	None	1.23 tons/hour	N/A
10-029	PDH42	PELLET DRYING HOPPER 42	None	None	1.23 tons/hour	N/A
10-030	PDH46	PELLET DRYING HOPPER 46	None	None	1.23 tons/hour	N/A
10-031	PDH41	PELLET DRYING HOPPER 41	None	None	1.23 tons/hour	N/A
10-032	PDH53	PELLET DRYING HOPPER 53	None	None	1.70 tons/hour	N/A
10-033	PDH51	PELLET DRYING HOPPER 51	None	None	1.70 tons/hour	N/A
10-034	PDH52	PELLET DRYING HOPPER 52	None	None	1.70 tons/hour	N/A
10-035	PDH37	PELLET DRYING HOPPER 37	None	None	0.33 tons/hour	N/A
10-036	PDH35	PELLET DRYING HOPPER 35	None	None	0.33 tons/hour	N/A
10-037	PDH36	PELLET DRYING HOPPER 36	None	None	0.33 tons/hour	N/A
10-038	PDH34	PELLET DRYING HOPPER 34	None	None	0.33 tons/hour	N/A
10-039	PDH31	PELLET DRYING HOPPER 31	None	None	0.33 tons/hour	N/A
10-040	PDH33	PELLET DRYING HOPPER 33	None	None	0.33 tons/hour	N/A
10-041	PDH32	PELLET DRYING HOPPER 32	None	None	0.33 tons/hour	N/A
10-042	PDH14	PELLET DRYING HOPPER 14	None	None	0.33 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices(b)	Maximum Capacity(c)	Date of Construct
10-043	PDH13	PELLET DRYING HOPPER 13	None	None	0.55 tons/hour	N/A
10-044	PDH12	PELLET DRYING HOPPER 12	None	None	0.55 tons/hour	N/A
10-045	PDH11	PELLET DRYING HOPPER 11	None	None	0.55 tons/hour	N/A
10-046	PDH65	PELLET DRYING HOPPER 65	None	None	0.55 tons/hour	N/A
10-047	PDH64	PELLET DRYING HOPPER 64	None	None	0.55 tons/hour	N/A
10-048	PDH63	PELLET DRYING HOPPER 63	None	None	0.55 tons/hour	N/A
10-049	DHE (S8)	DIE HEAD EXHAUST S-8/S-1	None	None	1.60 tons/hour	N/A
10-054	EDHE (S6)	EXTRUDER & DIE HEAD EXHAUST S-6	None	None	0.55 tons/hour	N/A
10-055	DHE (S10)	DIE HEAD EXHAUST S10	None	None	0.55 tons/hour	N/A
10-055	DHE (S2)	DIE HEAD EXHAUST S-2	None	None	0.20 tons/hour	N/A
10-056	PDH62	PELLET DRYING HOPPER 62	None	None	0.55 tons/hour	N/A
10-057	PDH61	PELLET DRYING HOPPER 61	None	None	0.55 tons/hour	N/A
10-077	PED	PROFILE EXTRUDER & DIE	None	None	0.50 tons/hour	N/A
10-078	PDH161	PROFILE PELLET DRYING HOPPER 161	None	None	0.50 tons/hour	N/A
10-079	PDH162	PROFILE PELLET DRYING HOPPER 162	None	None	0.50 tons/hour	N/A
10-080	PDH163	PROFILE PELLET DRYING HOPPER 163	None	None	0.50 tons/hour	N/A
10-081	PDH164	PROFILE PELLET DRYING HOPPER 164	None	None	0.50 tons/hour	N/A
10-082	PDH165	PROFILE PELLET DRYING HOPPER 165	None	None	0.50 tons/hour	N/A
10-083	PDH166	PROFILE PELLET DRYING HOPPER 166	None	None	0.50 tons/hour	N/A
10-097	CAVP-097	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-098	CAVP-098	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-099	QCSB	QC SPRAY BOOTH	None	None	Less Than 100 lb/hr	N/A
10-100	QABH	QA BURN HOOD	None	None	Less Than 100 lb/hr	N/A
10-101	QA01	QC OVEN 1	None	None	N/A	N/A
10-105	DCE	DIE CLEAN EXHAUST	None	None	N/A	N/A
10-106	S1 BLOWER	SCALE 1 BLOWER	None	Filter	5.43 tons/hour	N/A
10-107	S2 BLOWER	SCALE 2 BLOWER	None	Filter	5.43 tons/hour	N/A
10-108	S3 BLOWER	SCALE 3 BLOWER	None	Filter	5.43 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices(b)	Maximum Capacity(c)	Date of Construct
10-112	PDH51N	PELLET DRYER HOPPER	None	None	0.10 tons/hour	N/A
10-113	PDH52N	PELLET DRYER HOPPER	None	None	0.10 tons/hour	N/A
10-114	PDH53N	PELLET DRYER HOPPER	None	None	0.10 tons/hour	N/A
10-115	CAVP-115	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-116	CAVP-116	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-117	CAVP-117	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-118	CAVP-118	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-120	PDH131	PELLET DRYING HOPPER 131	None	None	0.78 tons/hour	N/A
10-121	PDH132	PELLET DRYING HOPPER 132	None	None	0.78 tons/hour	N/A
10-122	PDH133	PELLET DRYING HOPPER 133	None	None	0.78 tons/hour	N/A
10-123	PDH134	PELLET DRYING HOPPER 134	None	None	0.78 tons/hour	N/A
10-124	PDH135	PELLET DRYING HOPPER 135	None	None	0.78 tons/hour	N/A
10-125	CAVP-125	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-126	CAVP-126	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-127	T13ED	EXTRUDER/DIE EXHAUST	None	None	0.46 tons/hour	N/A
10-128	CAVP-128	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-129	CAVP-129	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-130	CAVP-130	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-131	CAVP-131	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-134	PDH1413	PELLET DRYING HOPPER 1413	None	None	1.23 tons/hour	N/A
10-135	PDH1414	PELLET DRYING HOPPER 1414	None	None	1.23 tons/hour	N/A
10-136	PDH1411	PELLET DRYING HOPPER 1411	None	None	1.23 tons/hour	N/A
10-136	PDH1421	PELLET DRYING HOPPER 1421	None	None	1.23 tons/hour	N/A
10-136	PDH1431	PELLET DRYING HOPPER 1431	None	None	1.23 tons/hour	N/A
10-137	PDH1412	PELLET DRYING HOPPER 1412	None	None	1.23 tons/hour	N/A
10-137	PDH1432	PELLET DRYING HOPPER 1432	None	None	1.23 tons/hour	N/A
10-138	PDH1441	PELLET DRYING HOPPER 1441	None	None	1.23 tons/hour	N/A
10-138	PDH1451	PELLET DRYING HOPPER 1451	None	None	1.23 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices(b)	Maximum Capacity(c)	Date of Construct
10-138	PDH1461	PELLET DRYING HOPPER 1461	None	None	1.23 tons/hour	N/A
10-139	PDH1442	PELLET DRYING HOPPER 1442	None	None	1.23 tons/hour	N/A
10-139	PDH1452	PELLET DRYING HOPPER 1452	None	None	1.23 tons/hour	N/A
10-139	PDH1462	PELLET DRYING HOPPER 1462	None	None	1.23 tons/hour	N/A
10-146	F14ED	F14 EXTRUDER & DIE	None	None	1.23 tons/hour	N/A
10-147	GS8-BH	GRINDER TRANSFER BLOWER	None	Filter	0.12 tons/hour	N/A
10-148	G2	GRINDER 2	None	None	0.12 tons/hour	N/A
10-149	G1	GRINDER	None	None	0.06 tons/hour	N/A
10-150	G3	GRINDER 3	None	None	0.12 tons/hour	N/A
10-150	G4	GRINDER 4	None	None	0.12 tons/hour	N/A
10-152	F12ED	F12 EXTRUDER & DIE	None	None	0.70 tons/hour	N/A
10-153	PDH121	PELLET DRYING HOPPER 121	None	None	0.70 tons/hour	N/A
10-154	PDH122	PELLET DRYING HOPPER 122	None	None	0.70 tons/hour	N/A
10-155	PDH123	PELLET DRYING HOPPER 123	None	None	0.70 tons/hour	N/A
10-156	PDH124	PELLET DRYING HOPPER 124	None	None	0.70 tons/hour	N/A
10-157	CAVP-157	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-158	CAVP-158	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-159	PDH111	PELLET DRYING HOPPER 111	None	None	0.55 tons/hour	N/A
10-160	PDH112	PELLET DRYING HOPPER 112	None	None	0.55 tons/hour	N/A
10-161	CAVP-161	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-162	TC (A)	RECOVERY DEVICE	None	Cyclone	Less Than 100 lb/hr	N/A
10-168	TC(B)	RECOVERY DEVICE	None	Cyclone	Less Than 100 lb/hr	N/A
10-171	AIR ELIM A	RECOVERY DEVICE	None	None	Less Than 100 lb/hr	N/A
10-172	AIR ELIM B	RECOVERY DEVICE	None	None	Less Than 100 lb/hr	N/A
10-178	KE	R&D SPRAY BOOTH - HWR	None	None	Less Than 100 lb/hr	N/A
10-179	R&D CCRC	R&D COLD CAST ROLL COATER, UV CURE AND EXTRUDER	None	None	Less Than 100 lb/hr	N/A
10-180	RRC&C	REVERSE ROLL COATER & CURE	None	None	1.60 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices(b)	Maximum Capacity(c)	Date of Construct
10-181	SILO 1 BV	BAGHOUSE SILO 1	None	Filter	5.43 tons/hour	N/A
10-182	SILO 2 BV	BAGHOUSE SILO 2	None	Filter	5.43 tons/hour	N/A
10-183	SILO 3 BV	BAGHOUSE SILO 3	None	Filter	5.43 tons/hour	N/A
10-184	LPS BLOWER	LPS BIN VENT BLOWER	None	None	0.50 tons/hour	N/A
10-185	F14 BV	BAGHOUSE RECOVERY DEVICE	None	Filter	1.23 tons/hour	N/A
10-186	S4 BV	BAGHOUSE RECOVERY DEVICE	None	Filter	1.20 tons/hour	N/A
10-187	S5 BV	BAGHOUSE RECOVERY DEVICE	None	Filter	1.75 tons/hour	N/A
10-189	DHE UCFL	DIE HOOD EXHAUST - ULTEM# CAST FILM LINE	None	None	0.20 tons/hour	N/A
10-191	PDH 1701	PELLET DRYING HOPPER 1701	None	None	0.20 tons/hour	N/A
10-192	PDH 1702	PELLET DRYING HOPPER 1702	None	None	0.20 tons/hour	N/A
10-193	PDH1703	PELLET DRYING HOPPER 1703	None	None	0.20 tons/hour	N/A
10-194	PDH1704	PELLET DRYING HOPPER 1704	None	None	0.20 tons/hour	N/A
10-195	CAVP-195	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-196	CAVP-196	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-200	FLH	FINISHING LAB HOOD	None	None	N/A	N/A
10-202	HWL-KL51	R&D HOOD WET LAB	None	None	N/A	N/A
10-203	HWL-KL52	R&D HOOD WET LAB	None	None	N/A	N/A
10-204	HWL-LM51	R&D HOOD WET LAB	None	None	N/A	N/A
10-205	HWL-LM52	R&D HOOD WET LAB	None	None	N/A	N/A
10-206	OWL-L3	R&D OVEN WET LAB	None	None	N/A	N/A
10-207	OWL-LM31	R&D OVEN WET LAB	None	None	N/A	N/A
10-208	OWL-LM32	R&D OVEN WET LAB	None	None	N/A	N/A
10-300	PDH113	PELLET DRYING HOPPER 113	None	None	0.55 tons/hour	N/A
10-301	PDH114	PELLET DRYING HOPPER 114	None	None	0.55 tons/hour	N/A
10-302	PDH91	PELLET DRYING HOPPER 91	None	None	0.55 tons/hour	N/A
10-302	PDH92	PELLET DRYING HOPPER 92	None	None	0.55 tons/hour	N/A
10-303	PDH93	PELLET DRYING HOPPER 93	None	None	0.55 tons/hour	N/A
10-303	PDH94	PELLET DRYING HOPPER 94	None	None	0.55 tons/hour	N/A
10-304	PDH20	PELLET DRYING HOPPER 20	None	None	0.20 tons/hour	N/A
10-304	PDH21	PELLET DRYING HOPPER 21	None	None	0.20 tons/hour	N/A
10-304	PDH22	PELLET DRYING HOPPER 22	None	None	0.20 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices(b)	Maximum Capacity(c)	Date of Construct
10-304	PDH23	PELLET DRYING HOPPER 23	None	None	0.20 tons/hour	N/A
10-305	PDH101	PELLET DRYING HOPPER 101	None	None	0.55 tons/hour	N/A
10-305	PDH104	PELLET DRYING HOPPER 104	None	None	0.55 tons/hour	N/A
10-306	PDH102	PELLET DRYING HOPPER 102	None	None	0.55 tons/hour	N/A
10-306	PDH103	PELLET DRYING HOPPER 103	None	None	0.55 tons/hour	N/A
10-307	PDH 54N	PELLET DRYING HOPPER 54 NEW	None	None	1.70 tons/hour	N/A
10-308	PDH55N	PELLET DRYING HOPPER 55 NEW	None	None	1.70 tons/hour	N/A
10-309	PDH56N	PELLET DRYING HOPPER 56 NEW	None	None	1.70 tons/hour	N/A
10-310	CAVP-310	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-311	CAVP-311	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-312	CAVP-312	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-313	CAVP-313	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-314	CAVP-314	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-315	CAVP-315	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-316	CAVP-316	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-317	CAVP-317	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-318	CAVP-318	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-319	CAVP-319	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-320	CAVP-320	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-321	CAVP-321	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-322	CAVP-322	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-323	CAVP-323	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-324	CAVP-324	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-325	CAVP-325	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-326	CAVP-326	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-327	CAVP-327	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-328	CAVP-328	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-329	CAVP-329	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices(b)	Maximum Capacity(c)	Date of Construct
10-330	CAVP-330	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-331	CAVP-331	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-332	CAVP-332	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-333	SB24	SURGE BIN 24	None	Filter	0.57 tons/hour	N/A
10-334	CAVP-334	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-335	CAVP-335	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-336	CAVP-336	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-337	CAVP-337	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
10-338	TC (C)	RECOVERY DEVICE	None	Cyclone	Less Than 100 lb/hr	N/A
10-339	F9DH	F9 DIE HOOD VENT	None	None	0.40 tons/hour	N/A
10-340	F-17 CYC	F-17 RECOVERY DEVICE	None	Cyclone	0.20 tons/hour	N/A
10-341	DHE (S1)	S1 DIE HEAD EXHAUST	None	None	0.55 tons/hour	N/A
10-343	CPVP1-4	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
10-344	CPVP5-8	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
10-347	F-903	FILTER RECEIVER	None	Filter	0.15 tons/hour	N/A
10-348	P3	P3 VACUUM PUMP SILOS 1 & 2	None	Filter	0.10 tons/hour	N/A
10-349	P4	P4 VACUUM PUMP SILOS 3 & 5	None	Filter	0.10 tons/hour	N/A
10-350	P5	P5 VACUUM PUMP SILOS 4 & 6	None	Filter	0.10 tons/hour	N/A
10-351	F908	F-908 FILTER RECEIVER	None	Filter	0.15 tons/hour	N/A
10-352	S-48	COATING ROOM LAB HOOD	None	None	N/A	N/A
10-353	MTLF18	CONAIR MATERIAL TRANSFER VENT LINE F-18	None	Filter	0.40 tons/hour	N/A
10-355	MTLF19	CONAIR MATERIAL TRANSFER VENT LINE F-19	None	Filter	0.40 tons/hour	N/A
10-356	F18BV	F-18 BARREL VENT	None	None	0.40 tons/hour	N/A
10-357	F19BV	F-19 BARREL VENT	None	None	0.40 tons/hour	N/A
10-362	SAW CHIPS	S16 SAW CHIP FILTER BAG	None	None	Less than 100 lbs/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* BEFORE shutdown of BW-BOILER and E BOILER the SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42,
S-4 and S-5. The boilers described in Section K of this permit, E BOILER, BW-BOILER and R BOILER are used for controlling VOC emissions from the SHEETFUMES stream.

* AFTER shutdown of BW-BOILER and E BOILER, the SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S-4 and S-5. The boiler described in Section K of this permit, R BOILER, or SHEETFUMES TO, described in this Section, is used for controlling VOC emissions from the SHEETFUMES stream.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

L.2.1 Prevention of Significant Deterioration Minor Limit (PSD) [326 IAC 2-2]

(a) The input of volatile organic compound (VOC) to the C-41 and C-42 coating lines shall be limited to a total of 490 tons per twelve (12) consecutive month period. This production limitation and use of one or more of the boilers, E BOILER, R BOILER, and BW-BOILER, for control as described in Condition K.2.2, is equivalent to 93 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the net emission increase below PSD significant emission levels. Compliance with this condition renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

(b) After startup, the SHEETFUMES TO's CO emissions are limited pursuant to Condition W.1.4(b).

(c) After startup, the SHEETFUMES TO's VOC emissions are limited pursuant to Condition W.1.4(c).

(d) After the startup of SHEETFUMES TO, the input of VOC to SHEETFUMES (C-41, C-42, S-4, and S-5) shall not exceed 543 tons per twelve (12) consecutive month period. This production limitation and use of the SHEETFUMES TO whenever the SHEETFUMES VOC emissions are vented to the air pollution control device, is equivalent to 5.7 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the emission increase below PSD significant emission levels. Compliance with this condition renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

L.2.2 National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating [40 CFR Part 63, Subpart JJJJ]

The Permittee shall comply with the requirements of 40 CFR 63, Subpart JJJJ by limiting organic HAP emissions from coating lines S-4, S-5, C-6, C-45, C7A, C7B, and C8 to a level specified in 40 CFR 63.3320(b)(1), (2), or (3) during times one or more coating lines use a web substrate. Descriptions of these provisions can be found in Section LL.1(b)(1), (2), or (3) of this permit. The requirements of 40 CFR 63, Subpart JJJJ do not apply to S-4, S-5, C-6, C-45, C7A, C7B, and C8 when a coating substrate that is not flexible enough to be wound or unwound as rolls is used (i.e., a substrate that does not meet the definition of web established in 40 CFR 63.3310).

L.2.3 National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products [40 CFR Part 63, Subpart PPPP]

In accordance with 40 CFR 63.4500(a)(1), the Permittee shall comply with the requirements of 40 CFR 63, Subpart PPPP, by using compliant materials that comply with the organic HAP emissions level specified in 40 CFR 63.4490(b)(1) for Sp-PPPC (including lines C-41 and C-42).

BEFORE Shutdown of BW-BOILER and E BOILER

L.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-2-5] [40 CFR 64]

Pursuant to 326 IAC 8-2-5, the Permittee shall not allow the discharge into the atmosphere VOC in excess of two and nine-tenths (2.9) pounds per gallon excluding water, as delivered to the coating applicator of the S-4, S-5, C-6, C7A, C7B, and C8 coating lines.

(a) For S-4 and S-5, the use of an enclosure system for capture of VOC and use of one or more of the boilers E BOILER, R BOILER, and BW-BOILER, for control as described in Condition K.2.3, limits VOC emissions to no more than the specified amount.

(b) C-6, C7A, C7B, and C8 shall use coatings that inherently do not emit VOC greater than 2.9 pounds per gallon, excluding water.

AFTER Shutdown of BW-BOILER and E BOILER

L.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-2-5] [40 CFR 64]

Pursuant to 326 IAC 8-2-5, the Permittee shall not allow the discharge into the atmosphere VOC in excess of two and nine-tenths (2.9) pounds per gallon excluding water, as delivered to the coating applicator of the S-4, S-5, C-6, C7A, C7B, and C8 coating lines.

(a) For S-4 and S-5, the use of an enclosure system for capture of VOC and use of R BOILER or SHEETFUMES TO for control at all times when the S-4 or S-5 coating processes are operating and VOC emissions are vented to the thermal oxidizer limits VOC emissions to no more than 2.9 pounds per gallon, excluding water.

(b) C-6, C7A, C7B, and C8 shall use coatings that do not emit VOC greater than 2.9 pounds per gallon, excluding water.

L.2.5 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$$E = 4.10\ P^{0.67}$$

Where:

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-010	EDV S5	1.70	5.85

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-011	EHV S4	1.23	4.71
10-012	EHV S3	0.33	1.95
10-013	EHV S1	0.20	1.39
10-014	PDH86	1.60	5.62
10-015	PDH85	1.60	5.62
10-016	PDH84	1.60	5.62
10-017	PDH83	1.60	5.62
10-018	PDH82	1.60	5.62
10-019	PDH81	1.60	5.62
10-020	PDH76	1.23	4.71
10-021	PDH75	1.23	4.71
10-022	PDH74	1.23	4.71
10-023	PDH73	1.23	4.71
10-024	PDH72	1.23	4.71
10-025	PDH71	1.23	4.71
10-026	PDH43	1.23	4.71
10-027	PDH45	1.23	4.71
10-028	PDH44	1.23	4.71
10-029	PDH42	1.23	4.71
10-030	PDH46	1.23	4.71
10-031	PDH41	1.23	4.71
10-032	PDH53	1.70	5.85
10-033	PDH51	1.70	5.85
10-034	PDH52	1.70	5.85
10-035	PDH37	0.33	1.95
10-036	PDH35	0.33	1.95
10-037	PDH36	0.33	1.95
10-038	PDH34	0.33	1.95

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-039	PDH31	0.33	1.95
10-040	PDH33	0.33	1.95
10-041	PDH32	0.33	1.95
10-042	PDH14	0.33	1.95
10-043	PDH13	0.55	2.75
10-044	PDH12	0.55	2.75
10-045	PDH11	0.55	2.75
10-046	PDH65	0.55	2.75
10-047	PDH64	0.55	2.75
10-048	PDH63	0.55	2.75
10-049	DHE (S8)	1.60	5.62
10-054	EDHE (S6)	0.55	2.75
10-055	DHE (S10)	0.55	2.75
10-055	DHE (S2)	0.20	1.39
10-056	PDH62	0.55	2.75
10-057	PDH61	0.55	2.75
10-077	PED	0.50	2.58
10-078	PDH161	0.50	2.58
10-079	PDH162	0.50	2.58
10-080	PDH163	0.50	2.58
10-081	PDH164	0.50	2.58
10-082	PDH165	0.50	2.58
10-083	PDH166	0.50	2.58
10-097	CAVP-097	1.50	5.38
10-098	CAVP-098	1.50	5.38
10-106	S1 BLOWER	5.43	12.7
10-107	S2 BLOWER	5.43	12.7
10-108	S3 BLOWER	5.43	12.7

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-112	PDH51N	0.10	0.877
10-113	PDH52N	0.10	0.877
10-114	PDH53N	0.10	0.877
10-115	CAVP-115	1.50	5.38
10-116	CAVP-116	1.50	5.38
10-117	CAVP-117	1.50	5.38
10-118	CAVP-118	1.50	5.38
10-120	PDH131	0.78	3.47
10-121	PDH132	0.78	3.47
10-122	PDH133	0.78	3.47
10-123	PDH134	0.78	3.47
10-124	PDH135	0.78	3.47
10-125	CAVP-125	1.50	5.38
10-126	CAVP-126	1.50	5.38
10-127	T13ED	0.46	2.44
10-128	CAVP-128	1.50	5.38
10-129	CAVP-129	1.50	5.38
10-130	CAVP-130	1.50	5.38
10-131	CAVP-131	1.50	5.38
10-134	PDH1413	1.23	4.71
10-135	PDH1414	1.23	4.71
10-136	PDH1411	1.23	4.71
10-136	PDH1421	1.23	4.71
10-136	PDH1431	1.23	4.71
10-137	PDH1412	1.23	4.71
10-137	PDH1432	1.23	4.71
10-138	PDH1441	1.23	4.71
10-138	PDH1451	1.23	4.71

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-138	PDH1461	1.23	4.71
10-139	PDH1442	1.23	4.71
10-139	PDH1452	1.23	4.71
10-139	PDH1462	1.23	4.71
10-146	F14ED	1.23	4.71
10-147	GS8-BH	0.12	0.990
10-148	G2	0.12	0.990
10-149	G1	0.06	0.620
10-150	G3	0.12	0.990
10-150	G4	0.12	0.990
10-152	F12ED	0.70	3.23
10-153	PDH121	0.70	3.23
10-154	PDH122	0.70	3.23
10-155	PDH123	0.70	3.23
10-156	PDH124	0.70	3.23
10-157	CAVP-157	1.50	5.38
10-158	CAVP-158	1.50	5.38
10-159	PDH111	0.55	2.75
10-160	PDH112	0.55	2.75
10-161	CAVP-161	1.50	5.38
10-180	RRC&C	1.60	5.62
10-181	SILO 1 BV	5.43	12.7
10-182	SILO 2 BV	5.43	12.7
10-183	SILO 3 BV	5.43	12.7
10-184	LPS BLOWER	0.50	2.58
10-185	F14 BV	1.23	4.71
10-186	S4 BV	1.20	4.63
10-187	S5 BV	1.75	5.97

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-189	DHE UCFL	0.20	1.39
10-191	PDH 1701	0.20	1.39
10-192	PDH 1702	0.20	1.39
10-193	PDH1703	0.20	1.39
10-194	PDH1704	0.20	1.39
10-195	CAVP-195	1.50	5.38
10-196	CAVP-196	1.50	5.38
10-300	PDH113	0.55	2.75
10-301	PDH114	0.55	2.75
10-302	PDH91	0.55	2.75
10-302	PDH92	0.55	2.75
10-303	PDH93	0.55	2.75
10-303	PDH94	0.55	2.75
10-304	PDH20	0.20	1.39
10-304	PDH21	0.20	1.39
10-304	PDH22	0.20	1.39
10-304	PDH23	0.20	1.39
10-305	PDH101	0.55	2.75
10-305	PDH104	0.55	2.75
10-306	PDH102	0.55	2.75
10-306	PDH103	0.55	2.75
10-307	PDH 54N	1.70	5.85
10-308	PDH55N	1.70	5.85
10-309	PDH56N	1.70	5.85
10-310	CAVP-310	1.50	5.38
10-311	CAVP-311	1.50	5.38
10-312	CAVP-312	1.50	5.38
10-313	CAVP-313	1.50	5.38

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-314	CAVP-314	1.50	5.38
10-315	CAVP-315	1.50	5.38
10-316	CAVP-316	1.50	5.38
10-317	CAVP-317	1.50	5.38
10-318	CAVP-318	1.50	5.38
10-319	CAVP-319	1.50	5.38
10-320	CAVP-320	1.50	5.38
10-321	CAVP-321	1.50	5.38
10-322	CAVP-322	1.50	5.38
10-323	CAVP-323	1.50	5.38
10-324	CAVP-324	1.50	5.38
10-325	CAVP-325	1.50	5.38
10-326	CAVP-326	1.50	5.38
10-327	CAVP-327	1.50	5.38
10-328	CAVP-328	1.50	5.38
10-329	CAVP-329	1.50	5.38
10-330	CAVP-330	1.50	5.38
10-331	CAVP-331	1.50	5.38
10-332	CAVP-332	1.50	5.38
10-333	SB24	0.57	2.81
10-334	CAVP-334	1.50	5.38
10-335	CAVP-335	1.50	5.38
10-336	CAVP-336	1.50	5.38
10-337	CAVP-337	1.50	5.38
10-339	F9DH	0.40	2.22
10-340	F-17 CYC	0.20	1.39
10-341	DHE (S1)	0.55	2.75
10-343	CPVP1-4	0.50	2.58

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-344	CPVP5-8	0.50	2.58
10-347	F-903	0.15	1.15
10-348	P3	0.10	0.877
10-349	P4	0.10	0.877
10-350	P5	0.10	0.877
10-351	F908	0.15	1.15
10-353	MTLF18	0.40	2.22
10-355	MTLF19	0.40	2.22
10-356	F18BV	0.40	2.22
10-357	F19BV	0.40	2.22

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from QABH, R&D CCRC, KE, TC (B) TC (A), TC (C) and SAW CHIPS shall not exceed 0.551 pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

BEFORE Shutdown of BW-BOILER and E BOILER

L.2.6 Volatile Organic Compounds (VOC)[326 IAC 2-2]

(a) Whenever the C-41 and C-42 coating processes are operating, Conditions K.2.8 and K.2.14 of this permit apply.

(b) The enclosure system to capture VOC emissions from the coating process shall operate at all times that the C-41 or C-42 coating process operates (the coating process is deemed to be operating if the cover on the coating line's dip tank is open, except if the cover is open for the purpose of performing maintenance and parts are not being coated).

AFTER Shutdown of BW-BOILER and E BOILER

L.2.6 Volatile Organic Compounds (VOC)[326 IAC 2-2]

(a) [RESERVED]

(b) The enclosure system to capture VOC emissions from the coating process shall operate at all times that the C-41 or C-42 coating process operates (the coating process is deemed to be operating if the cover on the coating line's dip tank is open, except if the cover is open for the purpose of performing maintenance and parts are not being coated).

(c) SHEETFUMES TO shall operate at all times the coating process SHEETFUMES (C-41, C-42, S-4, and S-5) are directing VOC emissions to SHEETFUMES TO while using VOC-based coatings.

(d) R BOILER shall operate at all times the coating process SHEETFUMES (C-41, C-42, S-4, and S-5) are directing VOC emissions to R BOILER while using VOC coatings.

L.2.7 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition L.2.1 and L.2.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) or by using formulation data supplied by the coating manufacturer. However, IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

AFTER Start-up of SHEETFUMES TO

L.2.7.1 Testing Requirements [326 IAC 2-6.1-5(a)(2), (4)] [326 IAC 2-1.1-11]

Within 180 days after the start up of SHEETFUMES TO, in order to demonstrate compliance with Condition L.2.1(c), the Permittee shall perform VOC destruction test on the SHEETFUMES TO, utilizing methods as approved by the commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

L.2.8 Methods and Procedures [326 IAC 20-11] [40 CFR 63, Subpart JJJJ]

Pursuant to 40 CFR 63, Subpart JJJJ, and in order to comply with Condition L.2.2, the Permittee shall comply with the applicable 40 CFR Part 63, Subpart JJJJ performance testing and compliance determination requirements listed in the following table for coating lines S-4, S-5, C-6, C-45, C7A, C7B, and C8 as applicable. The table also includes Section LL condition numbers where descriptions of the provisions can be found.

Section LL Permit Condition	Applicable 40 CFR Part 63, Subpart JJJJ Requirement	Regulatory Citation Description	S-4	S-5	C-6	C-45	C7A	C7B	C8
LL.2(a)(1)	63.3360(a)(1)	What performance tests must I conduct?	X	X	X	X	X	X	X
LL.2(c)	63.3360(c)	What performance tests must I conduct? - Organic HAP content	X	X	X	X	X	X	X
LL.2(d)	63.3360(d)	What performance tests must I conduct? - Volatile organic and coating solids content	X	X	X	X	X	X	X
LL.2(g)	63.3360(g)	What performance tests must I conduct? - Volatile matter retained in the coated web or otherwise not emitted to the atmosphere	X	X	X	X	X	X	X
LL.3(a)(1)	63.3370(a)(1)	How do I demonstrate compliance with the emissions standards - Use of “as-purchased” compliant coating materials	X	X	X	X	X	X	X
LL.3(a)(2)	63.3370(a)(2)	How do I demonstrate compliance with the emissions standards - Use of “as-applied” compliant coating materials	X	X	X	X	X	X	X
LL.3(a)(3)	63.3370(a)(3)	How do I demonstrate compliance with the emissions standards - Tracking total monthly organic HAP applied	X	X	X	X	X	X	X

Section LL Permit Condition	Applicable 40 CFR Part 63, Subpart JJJJ Requirement	Regulatory Citation Description	S-4	S-5	C-6	C-45	C7A	C7B	C8
LL.3(b)	63.3370(b)	How do I demonstrate compliance with the emissions standards - "As-purchased" compliant coating materials	X	X	X	X	X	X	X
LL.3(c)	63.3370(c)	How do I demonstrate compliance with the emissions standards - "As-applied" compliant coating materials	X	X	X	X	X	X	X
LL.3(d)	63.3370(d)	How do I demonstrate compliance with the emissions standards - Monthly allowable organic HAP applied	X	X	X	X	X	X	X
LL.3(l)	63.3370(l)	How do I demonstrate compliance with the emissions standards - Monthly allowable organic HAP emissions	X	X	X	X	X	X	X

L.2.9 Methods and Procedures [326 IAC 20-11][40 CFR 63, Subpart PPPP]

Pursuant to 40 CFR 63, Subpart PPPP, and in order to comply with Condition L.2.3, the Permittee shall comply with the applicable 40 CFR 63, Subpart PPPP compliance demonstration requirements listed in the following table for Sp-PPPC (including coating lines C-41 and C-42) as applicable.

Applicable 40 CFR Part 63, Subpart PPPP Requirements	Regulatory Citation Description	Sp-PPPC	
		C-41	C-42
63.4491(a)	What are my options for meeting the emission limits?	X	X
63.4492(a)	What operating limits must I meet?	X	X
63.4493(a)	What work practice standards must I meet?	X	X
63.4500(b)	What are my general requirements for complying with the subpart?	X	X
63.4540	By what date must I conduct the initial compliance demonstration?	X	X
63.4541	How do I demonstrate initial compliance with the emission limits?	X	X
63.4542	How do I demonstrate continuous compliance with the emission limitations?	X	X

L.2.10 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with L.2.4, the filters associated with facilities CAVP-097, CAVP-098, S1 BLOWER, S2 BLOWER, S3 BLOWER, CAVP-115, CAVP-116, CAVP-117, CAVP-118, CAVP-125, CAVP-126, CAVP-128, CAVP-129, CAVP-130, CAVP-131, GS8-BH, CAVP-157, CAVP-158, CAVP-161, TC (A), TC(B), SILO 1 BV, SILO 2 BV, SILO 3 BV, F14 BV, S4 BV, S5 BV, CAVP-195, CAVP-196, CAVP-310, CAVP-311, CAVP-312, CAVP-313, CAVP-314, CAVP-315, CAVP-316, CAVP-317, CAVP-318, CAVP-319, CAVP-320, CAVP-321, CAVP-322, CAVP-323, CAVP-324, CAVP-325, CAVP-326, CAVP-327, CAVP-328, CAVP-329, CAVP-330, CAVP-331, CAVP-332, SB24, CAVP-334, CAVP-335, CAVP-336, CAVP-337, TC (C), F-17 CYC, F-903, P3, P4, P5,

F908, MTLF18, MTLF19 and SAW CHIPS shall be in operation at all times that material is being transferred into the facility.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

L.2.11 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from emission units S1 BLOWER, S2 BLOWER, S3 BLOWER, SILO 1 BV, SILO 2 BV, and SILO 3 BV shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from S1 BLOWER, S2 BLOWER, S3 BLOWER, SILO 1 BV, SILO 2 BV, and SILO 3 BV, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

L.2.12 VOC emissions from C-41 Coating Process [40 CFR 64]

Whenever the C-41 coating process is operating using VOC-based coating:

(a) The Permittee shall, at least once every 15 minutes, monitor and record the pressure differential between the inside and outside of the coating application enclosure, and the inlet (airwash) and outlet (cooling) enclosures having natural draft openings to the atmosphere. All values recorded during an hour when C-41 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When, for any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) of the pressure differential, the pressure differential exceeds the range specified (C-41 Air Wash: less than 0.007 inches of water, C-41 Coating: less than 0.146 inches of water and greater than 0.015 inches of water, and C-41 Cooling: greater than 0.053 inches of water), the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below the 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable response steps. A temperature reading that is below 900°F, or the minimum temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C-Reponse to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

L.2.13 VOC emissions from C-42 Coating Process [40 CFR 64]

Whenever the C-42 coating process is operating using VOC-based coating:

(a) The Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when C-42 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.007 inches of water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable response steps. A temperature reading that is below 900°F, or the minimum temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

L.2.14 VOC emissions from S-4 Coating Process [40 CFR 64]

Whenever the S-4 coating process is operating using VOC-based coating:

(a) The Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when S-4 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.002 inches of water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that

is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable response steps. A temperature reading that is below 900°F, or the temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C-Response to Excursions or Exceedances contains the Permittee’s obligations with regard to taking the reasonable response steps required by this condition.

L.2.15 VOC emissions from S-5 Coating Process [40 CFR 64]

Whenever the S-5 coating process is operating using VOC-based coating:

(a) The Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when S-5 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.002 inches of water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable response steps. A temperature reading that is below 900°F, or the minimum temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C-Reponse to Excursions or Exceedances contains the Permittee’s obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

L.2.16 Record Keeping Requirements

(a) In order to document the compliance status with Conditions L.2.1 and L.2.4 the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (3) shall be maintained for each calendar month and shall be sufficient to

establish compliance with the VOC input limits and the VOC emission limits established in Conditions L.2.1 and L.2.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on a monthly basis.

(A) Records shall be sufficient to verify the type and amount used and may include purchase orders, invoices, and material safety data sheets (MSDS) and other relevant information.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The total VOC usage for each month.

(4) Records of the values used to calculate the hourly average and 3-hour rolling average pressure differential values for the coating application enclosure, the inlet (air wash) enclosure, and the outlet (cooling) enclosure monitored pursuant to Condition L.2.12.

(5) Records of the values used to calculate the hourly average and 3-hour rolling average pressure differential values monitored pursuant to Condition L.2.13.

(6) Records of the values used to calculate the hourly average and 3-hour rolling average pressure differential values monitored pursuant to Condition L.2.14.

(7) Records of the values used to calculate the hourly average and 3-hour rolling average pressure differential values monitored pursuant to Condition L.2.15.

(8) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.12.

(9) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.13.

(10) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.14.

(11) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.15.

(b) In order to document the compliance status with Condition L.2.2, the Permittee shall comply with the applicable 40 CFR Part 63, Subpart JJJJ record keeping and reporting requirements for coating lines S-4, S-5, C-6, C-45, C7A, C7B, and C8 as applicable. The table also includes Section LL condition numbers where descriptions of the provisions can be found.

Section LL Permit Condition	Applicable 40 CFR Part 63, Subpart JJJJ Requirement	Regulatory Citation Description	S-4	S-5	C-6	C-45	C7A	C7B	C8
LL.4(c)	63.3400(c)	What notifications and reports must I submit? - Semi-annual compliance report	X	X	X	X	X	X	X
LL.4(d)	63.3400(d)	What notifications and reports must I submit? - Notification of Performance Tests	X	X	X	X	X	X	X
LL.4(e)	63.3400(e)	What notifications and reports must I submit? - Notification of Compliance Status	X	X	X	X	X	X	X
LL.5(a)	63.3410(a)	What records must I keep?	X	X	X	X	X	X	X

(c) In order to document the compliance status with Condition L.2.3, the Permittee shall comply with the applicable 40 CFR 63, Subpart PPPP record keeping and reporting requirements for Sp-PPPC (including coating lines C-41 and C-42) as applicable.

Applicable 40 CFR Part 63, Subpart PPPP Requirements	Regulatory Citation Description	Sp-PPPC	
		C-41	C-42
63.4510(b)	What notifications must I submit? - Initial notification	X	X
63.4510(c)	What notifications must I submit? - Notification of compliance status	X	X
63.4520(a)	What reports must I submit? - Semiannual compliance report	X	X
63.4530(a)	What records must I keep?	X	X
63.4530(b)	What records must I keep?	X	X
63.4530(c)	What records must I keep?	X	X
63.4530(d)	What records must I keep?	X	X
63.4530(e)	What records must I keep?	X	X
63.4530(f)	What records must I keep?	X	X
63.4530(h)	What records must I keep?	X	X
63.4531	In what form and for how long must I keep my records?	X	X

(d) To document the compliance status with Condition L.2.11(a), the Permittee shall maintain the weekly record of the visible emission notations required by Condition L.2.11(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g the process did not operate during normal daylight hours or the unit did not operate during the week).

(e) All records required to be made by Conditions L.2.12, L.2.13, L.2.14, and L.2.15 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

L.2.17 Reporting Requirements

(a) In accordance with 40 CFR 64, the Permittee shall submit monitoring reports for the pressure differentials and SHEETFUMES TO temperature required to be monitored by Conditions L.2.12, L.2.13, L.2.14 and L.2.15. The reports shall be submitted at least every 6 months and include the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable);

(3) If a QIP is required, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

Results of monitoring of pressure differentials or SHEETFUMES TO temperature, as required by Conditions L.2.12, L.2.13, L.2.14 and L.2.15, that are out-of-range are not excursions and do not require excursion reporting if the results did not require response steps in accordance with Section C – Response to Excursions or Exceedances. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(35).

(b) A quarterly summary of the information to document the compliance status with Conditions L.2.1(a) and (d), shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(c) The Permittee shall submit the reports required by Condition L.2.17 to the address listed in Section C - General Reporting Requirements, of this permit

SECTION L.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Structured Products, Building 4

Temporary Boiler

(d) The boiler listed below represents a temporary, portable steam generating unit for Structured Products. The stack/vent I.D.; emission unit description; maximum heat capacity; and date of construction are in the table.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Maximum Capacity	Date of Construct
10-500	TEMPBOILER	Small natural gas or No.2 fuel oil fired boiler	10.468 MMBtu/hr	N/A

[(a)] Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

L.3.1 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The temporary boiler, identified as TEMPBOILER, is an affected facility under 40 CFR 60, Subpart Dc. The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1, that apply to TEMPBOILER.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
60.11(a)	Compliance with standards and maintenance requirements
60.11(d)	Compliance with standards and maintenance requirements
60.11(f)	Compliance with standards and maintenance requirements
60.11(g)	Compliance with standards and maintenance requirements

L.3.2 New Source Performance Standards (NSPS) [326 IAC 12] [40 CFR 60, Subpart Dc]

Pursuant to 40 CFR 60.42c(d) and 326 IAC 12, the Permittee shall not combust oil in the affected facility, TEMPBOILER, that contains greater than 0.5 percent by weight sulfur. The table that follows provides the specific applicable standards and monitoring provisions that apply to the TEMPBOILER.

Applicable 40 CFR Part 60, Subpart Dc Requirement	Regulatory Citation Description

Applicable 40 CFR Part 60, Subpart Dc Requirement	Regulatory Citation Description
60.42c(d)	Standard for Sulfur Dioxide
60.42c(i)	Standard for Sulfur Dioxide

L.3.3 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate Emission Limitations for Sources of Indirect Heating: emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from the boiler identified as TEMPBOILER shall not exceed 0.146 pounds of particulate matter per million British thermal unit (lb/MMBtu) heat input. This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where
Q = total source heat input capacity (MMBtu/hr)
For this unit, Q = 2,308.97 MMBtu/hr.

L.3.4 Significant Source Modification Avoidance Limit [326 IAC 2-7-10.5(f)]

In order to keep MSM 129-26621-00002 a minor source modification, the Permittee shall limit the hours of operation of the temporary boiler, identified as TEMPBOILER, to less than 1,500 hours per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit on the hours of operation for the temporary boiler, identified as TEMPBOILER, along with emergency generators, identified as 17-500 and 17-501, will limit the potential to emit NOx below twenty-five (25) tons per year and will render the requirements of 326 IAC 2-7-10.5(f) not applicable to this modification.

Compliance Determination Requirements

L.3.5 Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart Dc]

Pursuant to 40 CFR 60, Subpart Dc, compliance determination requirements for TEMPBOILER are identified in the following table:

Applicable 40 CFR Part 60, Subpart Dc Requirement	Regulatory Citation Description
60.42c(h)	Standard for Sulfur Dioxide
60.44c(h)	Compliance and Performance Test Methods and Procedures for Sulfur Dioxide
60.46c(e)	Emission Monitoring for Sulfur Dioxide

Pursuant to 40 CFR 60.42c(h), compliance with the fuel oil sulfur content limit of 0.05% by weight will be demonstrated via fuel supplier certification.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

L.3.6 Record Keeping and Reporting Requirements

(a) The table that follows provides record keeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1, that apply to TEMPBOILER.

Applicable 40 CFR Part 63, Subpart A Requirement	Regulatory Citation Description
60.7(a)	Notification and record keeping
60.7(b)	Notification and record keeping
60.7(f)	Notification and record keeping
60.7(g)	Notification and record keeping

TEMPBOILER is a mass-produced facility deemed to be purchased in completed form; therefore, the notification requirement in 60.7(a)(1) does not apply.

(b) During periods when the TEMPBOILER is installed, the reporting and record keeping requirements of 40 CFR 60, Subpart Dc, 40 CFR 60.48c(a), (d), (e), (f), (g), (i) and (j) shall apply. Records of fuel oil combustion in the TEMPBOILER shall be maintained and reported as follows:

(1) Record and maintain records of the amount of each fuel combusted during each calendar month and the information required to be reported under (2) below:

(2) Submit reports for each 6-month period as required by 40 CFR 60.48c(j).

Each report shall include:

(A) Calendar dates covered in the reporting period.

(B) Fuel supplier certification, including the following information: name of the oil supplier, a statement from the fuel oil supplier that the fuel oil complies with the specifications under the definition of distillate oil in §60.41c, and sulfur content of the fuel oil.

(C) A certified statement signed by the owner or operator of the affected facility that the records of the fuel oil certifications submitted represent all of the fuel oil combusted during the reporting period.

(c) In order to document compliance with Condition L.3.4, monthly records of the hours of usage of the temporary boiler, identified as TEMPBOILER, shall be maintained.

(d) All records required by Condition L.3.6 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(e) A quarterly summary of the information to document the compliance status with Conditions L.3.4 shall be submitted using the reporting forms located at the end of Section L, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

Section L consists of the following Sections: L.1, L.2, L.3 and five (5) Part 70 Quarterly Reporting Forms.

Condition L.3.6 concludes the Section L requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition L.2.1(a)
Facility: SHEETFUMES from C-41 and C-42 coating lines
Parameter: VOC
Limit: The input of volatile organic compound (VOC) to the C-41 and C-42 coating lines shall be limited to a total of 490 tons per twelve (12) consecutive month period.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this **reporting period**.
☐ Deviation/s occurred in this **reporting period**.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name:	SABIC Innovative Plastics Mt. Vernon, LLC
Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.:	T129-30384-00002; Condition L.2.1(d)
Facility:	SHEETFUMES from C-41 and C-42 coating lines
Parameter:	VOC
Limit:	The input of volatile organic compound (VOC) to the C-41, C-42, S-4, and S-5 coating lines shall be limited to a total of 543 tons per twelve (12) consecutive month period.

YEAR: _____ **QUARTER:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this reporting period.**
☐ **Deviation/s occurred in this reporting period.**
Deviation has been reported on: _____

Submitted by: _____
Title / Position:_____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition L.3.4
Facility: Temporary Boiler, identified as TEMPBOILER
Parameter: Hours of Usage
Limit: Less than 1,500 hours per twelve (12) consecutive month period.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Monitoring Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition L.2.17(a)
Facility: C-41, C-42, S-4, and S-5 coating lines (SHEETFUMES)
Parameter: Pressure Differentials (Inches of Water)
Limit: 3-hour rolling average value of the pressure differential (C-41 Air Wash: less than 0.007" H2O, C-41 Coating: less than 0.146" H2O and greater than 0.015" H2O, C-41 Cooling: greater than 0.053" H2O, C-42: less than 0.007" H2O, S-4: less than 0.002" H2O, S-5: less than 0.002 "H2O).

YEAR: _____ QUARTER:_____

Date of Excursion or Exceedance	Number	Duration	Cause of Excursion of Exceedance	Corrective Action Taken

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

AFTER Start-up of SHEETFUMES TO
Part 70 Monitoring Report
(Submit Report Quarterly)

Source Name:	SABIC Innovative Plastics Mt. Vernon, LLC
Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.:	T129-30384-00002 Condition L.2.17 (a)
Facility:	SHEETFUMES TO
Parameter:	Temperature that indicates proper performance of SHEETFUMES TO
Limit:	3-hour rolling average value of the temperature that indicates proper performance of SHEETFUMES TO as specified or recommended by the thermal oxidizer's manufacturer or demonstrated during a performance test

YEAR: _____ QUARTER:_____

Date of Excursion or Exceedance	Number	Duration	Cause of Excursion or Exceedance	Corrective Action Taken

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

SECTION M.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: LEXAN# Development, Building 7

LEXAN# Development Operations

(a) The LDF operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
11-018	BFBPAH	RAW MATERIAL ADDITION V3011	None	None	0.15 tons/hour	N/A
11-020	C-3041	VENTILATION SYSTEM BLOWER	None	None	N/A	N/A
11-025	V-9111	V-9111 REFRIGERATED WATER SYSTEM	None	None	N/A	N/A
11-027	C-8123	VENT GAS ABSORBER	None	Scrubber*	N/A	N/A
11-123	F-3313	F-3313 DUST COLLECTOR	None	Bagfilter	0.15 tons/hour	N/A
11-124	F-3311	F-3311 DUST COLLECTOR	None	Bagfilter	0.15 tons/hour	N/A
11-148	C-9014	DI HCL DRUM SCRUBBER	None	None	N/A	N/A
11-149	V-9811	DIESEL FUEL TANK	None	None	N/A	N/A
11-150	FDCS	FUGITIVE DUST COLLECTION SYSTEM	None	Bagfilter	less than 100 lbs/hr	N/A
11-151	LDF-OQEDV	LDF OQ EXTRUDER AND DIE VENT	None	Bagfilter	less than 100 lbs/hr	N/A
11-152	LDF-OQEDC	LDF OQ EXTRUDER DUST COLLECTOR	None	Bagfilter	less than 100 lbs/hr	N/A
11-153	V-3060	V-3060	None	Bagfilter	0.15 tons/hour	N/A
11-154	F-3017	K-TRON FEEDER	None	Bagfilter	0.15 tons/hour	N/A
11-155	F-3315	RESIN DRYER	None	Bagfilter	0.15 tons/hour	N/A
11-156	F-3316	RESIN DRYER	None	Bagfilter	0.15 tons/hour	N/A
11-157	F-3317	RESIN DRYER	None	Bagfilter	0.15 tons/hour	N/A
11-158	F-6010	BPA UNLOADING SYSTEM	None	Bagfilter	0.15 tons/hour	N/A
11-159	F-6011	BPA RECEIVER	None	Bagfilter	0.15 tons/hour	N/A

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

* There are no regulatory requirements for this scrubber. This scrubber is part of the polycarbonate development process which processes methylene chloride which is not a VOC.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

M.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units BFBPAH, F-3311 and F-3313 shall not exceed the rates calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for these emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
11-018	BFBPAH	0.15	1.15
11-123	F-3313	0.15	1.15
11-124	F-3311	0.15	1.15
11-153	V-3060	0.15	1.15
11-154	F-3017	0.15	1.15
11-155	F-3315	0.15	1.15
11-156	F-3316	0.15	1.15
11-157	F-3317	0.15	1.15
11-158	F-6010	0.15	1.15
11-159	F-6011	0.15	1.15

(b) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from emission units FDCS, LDF-OQEDV, and LDF-OQEDC shall not exceed 0.551 pound per hour because the process weight rate is less than one hundred (100) pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

M.1.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with M.1.1, the filters associated with emission units BFBPAH, F-3311, F-3313, FDCS, LDF-OQEDV, LDF-OQEDC, V-3060, F-3017, F-3315, F-3316, F-3317, F-6010, and F-6011 shall be in operation at all times that material is being transferred into the facility.

Section M consists of the following Sections: M.1.

Condition M.1.2 concludes the Section M requirements of this permit

SECTION N.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source or affected facility subject to the applicable regulation.

(a) The affected facilities subject to 40 CFR 60, Subpart RRR are identified as CppR-710E and CppR-710PE. Each affected facility consists of unit operations in which one or more chemicals or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed, plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(b) The affected facilities subject to 40 CFR 60, Subpart NNN are identified as CppC-310, CppC-610 and CppC-712. Each affected facility consists of a device or vessel in which distillation operations occur, including all associated internals (such as tray or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

(c) CppVV is an affected facility in the CPP Process Unit subject to 40 CFR 60, Subpart VV. CppVV consists of components assembled to produce Methanol and includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valve or lines, valves, and flanges or other connectors in VOC service and any other devices or systems required by Subpart VV.

(d) The CPP Resin area includes process heaters, identified as H-390, H-109, and H-790 which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-390, H-109, and H-790 (unit designed to burn gas 1 subcategory), are specified in Section D of this permit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

N.1.1 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD apply to H-390, H-109, and H-790 as specified in Section D.1 of this permit.

N.1.2 VOC Emissions from Synthetic Organic Chemical Manufacturing Industry [326 IAC 12][40 CFR 60, Subpart RRR][40 CFR 60, Subpart NNN]

(a) The Permittee shall comply with the requirements of 40 CFR 60, Subpart RRR for each of the affected facilities CppR-710E and CppR-710PE by following one of the compliance options below for each affected facility:

(1) Pursuant to 40 CFR 60.700(c)(5), if the Permittee routes the vent stream from the reactor process to a distillation unit subject to 40 CFR 60 Subpart NNN, and the vent stream has no other releases to the air except for a pressure relief valve, then the affected facility is exempt from all provisions of subpart RRR except for 40 CFR 60.705(r).

(2) The Permittee shall comply with the standards, monitoring, testing, reporting, and recordkeeping requirements in 40 CFR 60, Subpart RRR for the affected facility.

(3) The Permittee shall comply with the standards, monitoring, testing, reporting, and recordkeeping requirements in 40 CFR 60, Subpart RRR for the affected facility by complying with 40 CFR 63, Subpart FFFF pursuant to 40 CFR 63.2535(h).

(b) The Permittee shall comply with the requirements of 40 CFR 60, Subpart NNN for each of the affected facilities CppC-610 and CppC-712 by following one of the compliance options below for each affected facility:

(1) The Permittee shall comply with the standards, monitoring, testing, reporting, and recordkeeping requirements in 40 CFR 60, Subpart NNN for the affected facility.

(2) The Permittee shall comply with the standards, monitoring, testing, reporting, and recordkeeping requirements in 40 CFR 60, Subpart NNN for the affected facility by complying with 40 CFR 63, Subpart FFFF pursuant to 40 CFR 63.2535(h).

N.1.3 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to affected facilities CppC-310, CppC-610, CppC-712, CppR-710E, CppR-710PE and CppVV. After the compliance dates specified in 40 CFR 63.2445, for any or all of the affected facilities, CppC-310 CppC-610, CppC-712, CppR-710E, CppR-710PE and CppVV, the Permittee may elect to comply with applicable requirements in 40 CFR Part 63, Subpart FFFF as provided in 40 CFR 63.2535(h) and (k); and the requirements set forth in this condition will no longer apply to such affected facility.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	CppC-310	**CppC-610**	**CppC-712**	**CppR-710E**	**CppR-710PE**	CppVV
60.11(a)	Compliance with standards and maintenance requirements	X	**X**	**X**	**X**	**X**	X
60.11(d)	Compliance with standards and maintenance requirements	X	**X**	**X**	**X**	**X**	X

N.1.4 National Emissions Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing [40 CFR Part 63, Subpart FFFF]

The requirements of 40 CFR Part 63, Subpart FFFF specified in Section V.1 and V.2 of this permit apply to the miscellaneous organic chemical manufacturing unit identified as CppMONRes3.

Compliance Determination Requirements

N.1.5 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows provides performance testing requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to affected facilities CppC-310 CppC-610, CppC-712, CppR-710E, CppR-710PE, and CppVV. After the compliance dates specified in 40 CFR 63.2445, for any or all of the affected facilities, CppC-310 CppC-610, CppC-712, CppR-710E, CppR-710PE and CppVV, the Permittee may elect to comply with applicable requirements in 40 CFR Part 63, Subpart FFFF as provided in 40 CFR 63.2535(h) and (k); and the requirements set forth in this condition will no longer apply to such affected facility.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	CppC-310	**CppC-610**	**CppC-712**	**CppR-710E**	**CppR-710PE**	CppVV
60.8(a)	Performance tests	X	**X**	**X**	**X**	**X**	X
60.8(b)	Performance tests	X	**X**	**X**	**X**	**X**	X
60.8(c)	Performance tests	X	**X**	**X**	**X**	**X**	X
60.8(d)	Performance tests	X	**X**	**X**	**X**	**X**	X
60.8(e)	Performance tests	X	**X**	**X**	**X**	**X**	X
60.8(f)	Performance tests	X	**X**	**X**	**X**	**X**	X

N.1.6 Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart NNN]

Pursuant to 40 CFR 60, Subpart NNN, test methods and procedures applicable to affected facility CppC-310 are identified in the following table, along with the condition number where descriptions of the provisions can be found in Section HH. After the compliance dates specified in 40 CFR 63.2445 for the affected facility, CppC-310, the Permittee may elect to comply with applicable requirements in 40 CFR 63, Subpart FFFF as provided in 40 CFR 63.2535(h); and the requirements set forth in this condition will no longer apply to such affected facility.

Section HH Permit Condition	Applicable 40 CFR Part 60, Subpart NNN Requirement	Regulatory Citation Title
HH.3(e)	60.664(f)	Test Methods and Procedures
HH.3(f)	60.664(g)	Test Methods and Procedures
HH.3(g)	60.664(h)	Test Methods and Procedures

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

N.1.7 [Reserved]

N.1.8 [Reserved]

N.1.9 Record Keeping and Reporting Requirements

(a) The table that follows provides record keeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to affected facilities CppC-310, CppC-610, CppC-712, CppR-710E, CppR-710PE, and CppVV. After the compliance dates specified in 40 CFR 63.2445, for any or all of the affected facilities CppC-310, CppC-610, CppC-712, CppR-710E, CppR-710PE and CppVV, the Permittee may elect to comply with applicable requirements in 40 CFR Part 63, Subpart FFFF as provided in 40 CFR 63.2535(h) and (k); and the requirements set forth in this condition will no longer apply to such affected facility.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	CppC-310	CppC-610	CppC-712	CppR-710E	CppR-710PE	CppVV
60.7(a)	Notification and record keeping	X	X	X	X	X	X
60.7(b)	Notification and record keeping	X	X	X	X	X	
60.7(f)	Notification and record keeping	X	X	X	X	X	X
60.7(g)	Notification and record keeping	X	X	X	X	X	X
60.7(h)	Notification and record keeping	X	X	X	X	X	X

(b) All records required to be maintained by Condition N.1.9 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(c) The Permittee shall submit the reports and records required to be submitted by Condition N.1.9 to the address listed in Section C - General Reporting Requirements, of this permit.

(d) Pursuant to 40 CFR 60.705(r) and if the Permittee chooses the compliance option to comply with Subpart RRR in accordance with 40 CFR 60.700(c)(5) as provided in Condition N.1.2(a)(1), the Permittee must submit the process design description to IDEM OAQ and retain it for the life of the process.

SECTION N.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Process Operations

(e) The CPP Resin process operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate; the date of construction; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-154	E-314*	V-310 STORAGE TANK (note: V-310 is the C-310 distillation overheads receiver)	None	Condenser	N/A	Prior 1985
12-632A/B	E-313	CONDENSER E-313	None	E-313 is recovery device	N/A	1983
12-169	H-390	H-390 HOT OIL HEATER CAPABLE OF BURNING NATURAL GAS AND OFF GAS***	None	None	17.28 MMBtu/hr	1984
12-357	VLX CTC1	VALOX COOLING TOWER CELL 1	None	None	N/A	N/A
12-358	VLX CTC2	VALOX COOLING TOWER CELL 2	None	None	N/A	N/A
12-701	H-790	22 MMBTU/hr natural gas-fired process heater, formerly 04-213 M-475 in BPA constructed in 1975	None	None	22 MMBtu/hr	Relocated 2014

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-172	W370A/B	TRANSFER BINS W-370/A/B	None	None	13.75 tons/hr	N/A
12-230	DTL	TRUCK LOADING	None	None	N/A	N/A
12-247	PD-470A	PELLETIZER DRYER D-470A	None	None	3.44 tons/hr	N/A
12-247	PD-470B	PELLETIZER DRYER D-470B	None	None	3.44 tons/hr	N/A
12-251	E-602	UNLOADING FACILITY TANK V-600	None	None	N/A	N/A
12-356	PD-370A	PELLETIZER DRYER D-370A	None	None	3.44 tons/hr	N/A
12-356	PD-370B	PELLETIZER DRYER D-370B	None	None	3.44 tons/hr	N/A
12-359	H-370	DIE HEAD CLEANING OVEN H-370	None	None	N/A	N/A
12-561	V-496	V-496 RAIL CAR UNLOADING	None	None	N/A	N/A
12-586**	BOVEN	H-390 OFF GAS VENT	None	None	N/A	N/A
12-702	PTA US	PTA RAIL CAR UNLOADING STATION	None	Filter	21 tons/hr	N/A
12-703	PTA SILO	PTA STORAGE SILO	None	Filter	21 tons/hr	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* The distillation operation identified as C-310 is subject to NSPS requirements. C-310 vents through stack/vent 12-154, identified as emission unit E-314.

** S/V 12-586 is a stack that provides by-pass from H-390 for process safety purposes; 12-586 is normally not an active vent.

*** The distillation operations identified as affected facilities CppC-610 and CppC-712 are subject to NSPS Subpart NNN requirements and vent to H-390 as part of the fuel gas system.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

N.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to PC (65) 1813, Condition 4, issued on December 21, 1989, any change or modification which increases the total VOC emissions from emission units E-314, E-313, and the emission units listed in Condition N.3.1 to 23.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions E.2.1(a), E.3.1, F.4.1, and N.3.1 ensures that the net emission increase from the 1989 expansion project (pursuant to PC (65) 1813, issued on December 21, 1989, as amended in this Title V permit) is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

N.2.2 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4(a)]

Pursuant to 326 IAC 6-2-1(g), the PM emissions from H-390 shall be limited to 0.16 pounds per MMBtu heat input.

N.2.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	Max Process Weight Rate (tons/hr)	Rate of Emission (lb/hr)
12-172	W370A/B	13.75	23.7
12-247	PD-470A	3.44	9.38
12-247	PD-470B	3.44	9.38
12-356	PD-370A	3.44	9.38
12-356	PD-370B	3.44	9.38
12-702	PTA US	21.5	32.0
12-703	PTA SILO	21.5	32.0

N.2.4 VOC Emissions from Synthetic Organic Chemical Manufacturing Industry [326 IAC 12] [40 CFR 60, Subpart NNN]

Pursuant to 40 CFR 60.660(c)(6), if the Permittee maintains the flow rate of the C-310 distillation operation vent stream to less than 0.008 standard cubic meters per minute, then C-310 is exempt from all provisions of Subpart NNN except for 40 CFR 60.664(h); and 60.665 (i), (l)(5), and (o). Instead of complying with this provision, the Permittee may elect the alternative operating scenario for the affected facility CppC-310 vent stream as described in Condition N.2.5, or after the compliance date, elect compliance pursuant to 40 CFR 63, Subpart FFFF as provided in 40 CFR 63.2535(h).

N.2.5 Alternative Operating Scenario for C-310 to comply with 40 CFR 60, Subpart NNN [326 IAC 12] [40 CFR 60, Subpart NNN]

Instead of complying with the provisions of Condition N.2.4, the Permittee may elect to comply with the alternative operating scenario described in this condition. If this alternative is chosen, then pursuant to 40 CFR 60.660(c)(4), the Permittee shall maintain a total resource effectiveness (TRE) index value greater than 8.0 for the affected facility CppC-310 vent stream and be exempt from all provisions of Subpart NNN except for 40 CFR 60.662; 60.664(e), (f), and (g); and 60.665 (h) and (l).

N.2.6 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable, the Permittee shall comply with the following for the PTA US and PTA operation:

(a) PM emissions from the PTA US and PTA SILO shall not exceed 0.408 pounds per hour, each.

(b) PM10 emissions from the PTA US and PTA SILO shall not exceed 0.408 pounds per hour, each.

(c) PM2.5 emissions from the PTA US and PTA SILO shall not exceed 0.408 pounds per hour, each.

Compliance with these limits will ensure that the emissions from the PTA US and PTA SILO are less than 25 tons per year for PM emissions, 15 tons per year for PM10 emissions and 10 tons per year for PM2.5 emissions and render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2014 modification.

Compliance Determination Requirements

N.2.7 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Condition N.2.3, the filters associated with the emission units PTA US and PTA SILO shall be in operation, in accordance with manufacturer's recommendations or good management practices to minimize loss of product, at all times that material is being transferred to or from the emissions unit.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

N.2.8 Visible Emissions Notations

(a) Visible emission notations of a PTA US and PTA SILO emission point shall be performed once per week during normal daylight operations when loading. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from PTA US or PTA SILO, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

N.2.9 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 60, Subpart NNN and in order to document the compliance status with Condition N.2.4, the Permittee shall keep records and submit reports as specified in the applicable 40 CFR 60, Subpart NNN requirements listed in the following table. The table also includes Section HH condition numbers where descriptions of these provisions can be found.

Section HH Permit Condition	Applicable 40 CFR Part 60, Subpart NNN Requirement	Regulatory Citation Title	**Cpp**C-310 Vent Stream
HH.4(i)	60.665(i)	Reporting and Recordkeeping Requirements	X
HH.4(l)	60.665(l)	Reporting and Recordkeeping Requirements	X
HH.4(o)	60.665(o)	Reporting and Recordkeeping Requirements	X

(b) If the Permittee chooses to comply with the alternative operating scenario by maintaining a total resource effectiveness (TRE) index value greater than 8.0 for the C-310 vent stream as described in Condition N.2.5, then the Permittee shall keep records and submit reports as specified in the applicable 40 CFR 60, Subpart NNN citations in the table below. The table also includes Section HH condition numbers where descriptions of these provisions can be found.

Section HH Permit Condition	Applicable 40 CFR Part 60, Subpart NNN Requirement	Regulatory Citation Title	**Cpp**C-310 Vent Stream
HH.4(h)	60.665(h)	Reporting and Recordkeeping Requirements	X
HH.4(l)	60.665(l)	Reporting and Recordkeeping Requirements	X

(c) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the alternative scenario under which it operates as detailed in Condition N.2.5. A summary of these records shall be included with the annual compliance certification submitted pursuant to Section B.10 - Annual Compliance Certification.

(d) To document the compliance status with Condition N.2.8, the Permittee shall maintain a weekly record of visible emission notations. When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of visible emission notation (e.g the process did not operate during normal daylight hours or the unit did not operate during the week.).

(e) All records required to be maintained by Condition N.2.9 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(f) The Permittee shall submit the reports and records required to be submitted by Condition N.2.9 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION N.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Area Tanks

(f) Tanks located in the CPP Resin Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate; the date of construction; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
12-003	TK-106	RECOVERY TANK T106	None	None	N/A	Prior to 1984
12-150	V-318	V-318 STORAGE TANK	None	None	4.1 m^3	1983
12-153	JKD 308	V-308 STORAGE TANK	None	Condenser	6.7 m^3	1984
12-156	E-322	V-320/E-322 STORAGE TANK	None	Condenser	3.3 m^3	1984
12-157	JKD PIPE	V330 STORAGE TANK	None	Condenser	3.3 m^3	1984
12-159	V-340	V-340 STORAGE TANK	None	None	5.6 m^3	1984
12-160	V-450	V-450 STORAGE TANK	None	None	6.4 m^3	N/A
12-162	V-360	V-360 STORAGE TANK	None	None	6.4 m^3	1984
12-165	V-364	V-364 STORAGE TANK	None	None	6.7 m^3	1984
12-229	V-460	V-460 STORAGE TANK	None	None	8.7 m^3	1988
12-560	V-401	TANK V-401	V301/401SC*	None	417 m^3	1988
12-632A/B	E-104A	STORAGE TANK T104A	Scrubber C-510*	Condenser E-104A	90.84 m^3	1973
12-632A/B	E-104B	STORAGE TANK T104B	Scrubber C-510*	Condenser E-104B	113.5 m^3	1975
12-632A/B	E-313	STORAGE TANK V-311	Scrubber C-510*	Condenser E-313	204.5 m^3	1984
12-632A/B	E-602	STORAGE TANK V-600	Scrubber C-510*	None	44.5 m^3	1984

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
12-114	E-1110	STORAGE TANK (T-1110)	None	None	193 m^3	1989
12-149	V-304	V-304 STORAGE TANK	None	None	96 m^3	1984
12-152	V-307	V-307 STORAGE TANK	None	None	417 m^3	1984
12-158	JACK PIPE	V-431 STORAGE TANK	None	Condenser	1.0 m^3	1988
12-161	V-351	V-351 STORAGE TANK	None	None	3.5 m^3	1984
12-163	V-362	V-362 STORAGE TANK	None	None	3.5 m^3	1984
12-164	V-363	V-363 STORAGE TANK	None	None	2.0 m^3	N/A
12-166	V-390	V-390 STORAGE TANK	None	None	52 m^3	1984
12-168	V-392	V-392 STORAGE TANK	None	None	3.7 m^3	1984
12-560	V-301	STORAGE TANK	V301/401SC*	None	N/A	N/A
12-359	V-302	STORAGE TANK	None	None	17.1 m^3	1984
12-359	V-306	STORAGE TANK	None	None	0.8 m^3	1984

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Emissions from storage tanks V-301 and V-401 are routed to the scrubber identified as V301/401SC and emissions from TK-104A, TK-104B, V-311 and V-600 are routed to the water scrubber identified as C-510.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

N.3.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to PC (65) 1813, Condition 4, issued on December 21, 1989, any change or modification which increases the total VOC emissions from emission units V-304, V-307, JKD 308, E-322, JKD PIPE, JACK PIPE, V-340, V-450, V-364, V-390 and the emission units listed in Condition N.2.1 to 23.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions E.2.1(a), E.3.1, F.4.1, and N.2.1 ensures that the net emission increase from the 1989 expansion project (pursuant to PC (65) 1813, issued on December 21, 1989, as amended by this Title V permit) is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

N.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to CP 129-5947-00002, Condition 3, issued on October 1, 1996, and revised through the Title V permit:

(a) Emissions from emission unit V-301 shall not exceed 24.0 tons of VOC per 12 consecutive month period with compliance determined at the end of each month.

(b) Combined VOC emissions from tanks V-301 and V-302 shall not exceed 24.9 tons per year.

Compliance with these limits make the total VOC emissions less than 25 tons per year and renders the requirements of 326 IAC 8-1-6, New Facilities, General Reduction Requirements not applicable to the 1996 DMT liquid storage modification.

N.3.3 Volatile Organic Liquid Storage Vessels [326 IAC 12-1] [40 CFR 60, Subpart Kb]

(a) Pursuant to 40 CFR 63.112b(a), the Permittee shall comply with the Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60, Subpart Kb] by meeting the applicable emission standards and monitoring provisions of 40 CFR 60.112b(a)(3) for the storage vessel identified as V-401.

(b) Pursuant to 40 CFR 60.112b(a)(3), the storage vessel identified as V-401 is controlled by a closed vent system and scrubber identified as V301/401SC. Descriptions of these provisions can be found in Section KK.

(1) Pursuant to 40 CFR 60.112b(a)(3)(i), the closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel identified as V-401 and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR 60.485(b).

(2) Pursuant to 40 CFR 60.112b(a)(3)(ii), the scrubber identified as V301/401SC shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater.

Compliance Determination Requirements

N.3.4 Volatile Organic Compounds (VOC) Control

For purposes of determining compliance with Condition N.3.2, the Permittee shall use the following equation to determine the VOC emissions for each month, and then sum the monthly emissions for the most recent 12 consecutive month period:

$$VOCEmissions \equiv \left[\frac{1Ton}{2000lbs}\right] \otimes \left[\left(T1_{SCRUB} \otimes EF1_{DMT}\right) \oplus \left(T2_{ATM} \otimes EF2_{DMT}\right) \oplus \left(T3_{ATM} \otimes EF3_{DMT}\right)\right]$$

Where:

$T1_{SCRUB}$ = Number of hours tank V-301 operated normally and was vented through the scrubber during the month.

$EF1_{DMT}$ = Emission factor of 5.47 lb VOC/hr or the emission factor determined in the most recent performance test.

$T2_{ATM}$ = Number of hours tank V-301 was vented directly to the atmosphere with no truck or railcar unloading during the month;

$EF2_{DMT}$ = Emission factor of 5.47 lb VOC/hr or the emission factor determined in the most recent performance test.

$T3_{ATM}$ = Number of hours tank V-301 was vented directly to the atmosphere with truck or railcar unloading during the month; and

$EF3_{DMT}$ = Emission factor of 5.47 lb VOC/hr or the emission factor determined in the most recent performance test.

N.3.5 Testing and Procedures Required by 40 CFR 60, Subpart Kb [326 IAC 12-1]
[40 CFR 60, Subpart 60.113b]

(a) Pursuant to 40 CFR 60.113b(c)(2) and in order to determine compliance with Condition N.3.3, the Permittee shall monitor the following parameters of the closed vent system and control device in accordance with the operating plan submitted to IDEM, OAQ:

Stack/Vent	Control or Recovery Device To Be Monitored	Parameter(s) To Monitor	Parameter Range
12-560	Eductor	Methanol Flow Rate	≥ 30 gallons per minute (GPM)
12-560	Heat Exchanger E415	Outlet Temperature of Vapor	≤ 45°C
12-560	Packed Column C410	Water Flow Rate	≥ 4.6 gallons per minute (GPM)

(b) In order to demonstrate compliance with Condition N.3.2, the Permittee shall conduct a performance test to verify the emission factors in Condition N.3.4, using methods as approved by the Commissioner on the following:

(1) The outlet of the scrubber identified as V301/401SC to verify the emission factor, EF_{1DMT}, used during times V-301 is vented through the scrubber. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration;

(2) The tank identified as V-301 shall be tested to verify the emission factor, EF_{3DMT}, used during times the tank vented directly to the atmosphere while truck or railcar unloading; and

(3) The tank identified as V-301 shall be tested to verify the emission factor, EF_{2DMT}, used during times the tank vented directly to the atmosphere without truck or railcar unloading.

The resulting emission factors from these tests shall be used in the equation specified in Condition N.3.4. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

N.3.6 Record Keeping and Reporting Requirements

(a) In order to document the compliance status with Condition N.3.2 and N.3.4, the Permittee shall maintain records in accordance with (1) through (4) below. Records for (1) through (4) shall be maintained for each month and shall be sufficient to establish compliance with the VOC emission limit established in Condition N.3.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The amount of time, in hours, V-301 is vented through the scrubber; directly to the atmosphere with no truck or railcar unloading; and directly to the atmosphere with truck or railcar unloading;
(2) The amount of VOCs emitted from storage tank V-301, calculated pursuant to Condition N.3.4, and include the amount of VOCs emitted from each type of venting option;
(3) Number of startups for tank V-302; and
(4) Material safety data sheets (MSDS) for the contents.

(b) Pursuant to 40 CFR 60, Subpart Kb and in order to document compliance with Condition N.3.3, the Permittee shall keep records and submit reports as specified in the applicable 40 CFR 60, Subpart Kb requirements listed in the following table, the table also includes Section KK condition numbers where descriptions of these provisions can be found. The applicable requirements in the table below do not apply if after the compliance date the Permittee elects to comply with the requirements for Group 1 storage tanks pursuant to 40 CFR 63.2535(c).

Section KK Permit Condition	Applicable 40 CFR Part 60, Subpart Kb Requirement	Regulatory Citation Title	V301/401SC
KK.3(c)	60.115b(c)	Reporting and Recordkeeping Requirements	X
KK.4(a)	60.116b(a)	Monitoring of Operations	X
KK.4(b)	60.116b(b)	Monitoring of Operations	X

(c) All records required to be maintained by Condition N.3.6 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

N.3.7 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with Condition N.3.2 shall be submitted using the reporting forms located at the end of this permit, or the equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(b) The Permittee shall submit the reports and records required to be submitted by Condition N.3.7 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION N.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Leak Detection and Repair (LDAR) Components

(g) LDAR applies to the collection of all equipment (as defined in 40 CFR 60.481) located in the CppVV affected facility. This equipment includes each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector that is in VOC service. In VOC service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VOC. [40 CFR 60.481]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

N.4.1 Equipment Leaks [326 IAC 12] [40 CFR 60, Subpart VV]

Pursuant to 40 CFR 60.482-1, Subpart VV, the Permittee shall control leaks of VOCs from each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service; and any devices or systems required by Subpart VV according to the applicable 40 CFR 60, Subpart VV requirements in the following table unless, after the compliance date of 40 CFR 63, Subpart FFFF, the Permittee elects to comply with 40 CFR 63, Subpart FFFF pursuant to 40 CFR 63.2535(k). The following table also contains Section GG condition numbers where descriptions of the Subpart VV provisions can be found.

Section GG Permit Condition	Applicable 40 CFR Part 60, Subpart VV Requirement	Regulatory Citation Title
GG.1	60.482-2	Standards: Pumps in Light Liquid Service
GG.2	60.482-3	Standards: Compressors
GG.3	60.482-4	Standards: Pressure Relief Devices in Gas/Vapor Service
GG.4	60.482-5	Standards: Sampling Connection Systems
GG.5	60.482-6	Standards: Open-Ended Valves or Lines
GG.6	60.482-7	Standards: Valves in Gas/Vapor Service and in Light Liquid Service
GG.7	60.482-8	Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors
GG.8	60.482-10	Standards: Closed Vent Systems and Control Devices
GG.9	60.482-9	Standards: Delay of Repair
GG.10	60.482-1	Monitoring Requirements
GG.11	60.483-1	Alternative standards for valves-allowable percentage of valves leaking.
GG.12	60.483-2	Alternative standards for valves-skip period leak detection and repair.
GG.13	60.485	Test Methods and Procedures

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

N.4.2 Record Keeping and Reporting Requirements

(a) Pursuant to 40 CFR 60.486 and 60.487, Subpart VV and to document compliance with Condition N.4.1, the Permittee shall keep records and submit reports as specified in the applicable 40 CFR Part 60, Subpart VV citations in the following table, unless, after the compliance date, the Permittee elects to comply with 40 CFR 63, Subpart FFFF pursuant to 40 CFR 63.2535(k). The following table also contains Section GG condition numbers where descriptions of the Subpart VV provisions can be found.

Section GG Permit Condition	Applicable 40 CFR Part 60, Subpart VV Requirement	Regulatory Citation Title
GG.14	60.486	Recordkeeping Requirements
GG.15	60.487	Reporting Requirements

(b) All records required to be maintained by Condition N.4.2 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(c) The Permittee shall submit the reports and records required to be submitted by Condition N.4.2 to the address listed in Section C - General Reporting Requirements, of this permit.

Section N consists of the following Sections: N.1, N.2, N.3, N.4, and one (1) Part 70 Quarterly Reporting Form.

Condition N.4.2 concludes the Section N requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002
Facility: V-301; S/V 12-560; Condition N.3.2(a)
Parameter: VOC
Limit: 24.0 tons of VOC per 12-month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period

☐ Deviation/s occurred in this reporting period

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

SECTION O.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: CPP Finishing, Buildings 29 and 30

CPP Finishing Operations

(a) The CPP Finishing operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Insignificant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-039	CL2RH	CL2 RESIN HOPPER	None	None	0.5 tons/hour	N/A
12-042	V-506D	V-506 ELUTRIATOR DUST COLLECTOR	Filter	None	2 tons/hour	N/A
12-057	V-506	V506 RESIN HOPPER	None	None	2 tons/hour	N/A
12-072	SILO J	J RAW MATERIAL SYSTEM	None	Filter	1.5 tons/hour	N/A
12-073	SILO K	K RAW MATERIAL SYSTEM	None	Filter	1.5 tons/hour	N/A
12-137	L12RBF/A	L12 195 HOPPER	None	Filter	1.2 tons/hour	N/A
12-138	L12RBF/B	L12 315 HOPPER	None	Filter	1.2 tons/hour	N/A
12-142	L13RBF/A	L13 195 HOPPER	None	Filter	1.2 tons/hour	N/A
12-143	L13RBF/B	L13 315 HOPPER	None	Filter	1.2 tons/hour	N/A
12-145	L4CF	L4/12/13 CENTRAL COLLECTION SYSTEM	None	Filter	3.5 tons/hour	N/A
12-170	CSM	CHIP SILO M	None	None	5 tons/hour	N/A
12-171	CSN	CHIP SILO N	None	None	5 tons/hour	N/A
12-173	BCB (VLX)	BAG COLLECTOR BLOWER	None	Filter	5 tons/hour	N/A
12-181	CL4RBF/A	BAG FILTER 315	None	Filter	0.5 tons/hour	N/A
12-182	CL4RBF/B	BAG FILTER 195	None	Filter	0.5 tons/hour	N/A
12-185	L15RBF/A	V1501 L15 195 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-186	L15RBF/B	V1502 L15 315 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-189	L16RBF/A	V1601 L16 195 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-190	L16RBF/B	V1501T L16 315 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-193	L17RBF/A	V1701 L17 195 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-194	L17RBF/B	V1701 L17 315 RESIN FLEX - KLEEN BAG FILTER	None	Filter	2.5 tons/hour	N/A
12-195	FRSS	FR STORAGE SILO	None	Filter	less than 100 lbs/hr	N/A
12-196	FPRCS2	HOFFMAN BLOWER K-005	None	Filter	9 tons/hour	N/A
12-197	L14EFP	COMP-2 BLOWER K-003	None	Filter	less than 100 lbs/hr	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
12-201	L8LPSA	LEXAN# POWDER SILO A F812A	None	Filter	1.5 tons/hour	N/A
12-203	L8RBF/A	V915 LINE 8 195 VESSEL	None	Filter	2.5 tons/hour	N/A
12-204	L8RBF/B	V1515B LINE 8 315 VESSEL	None	Filter	2.5 tons/hour	N/A
12-205	L8LPF	L8 LEXAN# POWDER DAY BIN BAG FILTER A	None	Filter	1.5 tons/hour	N/A
12-206	L15-17	EXTRUDER FUME VENTILATION LINES 15-17 SOUTH	None	None	0.3465 tons/hour	N/A
12-207	FCDC2	L5 ROOF TOP MICA HOPPER	None	Filter	1.75 tons/hour	N/A
12-208	BLS-A	BULK LOADING SILO A	None	None	3 tons/hour	N/A
12-209	BLS-B	BULK LOADING SILO B	None	None	3 tons/hour	N/A
12-210	BLS-C	BULK LOADING SILO	None	None	3 tons/hour	N/A
12-211	BLS-D	BULK LOADING SILO D	None	None	3 tons/hour	N/A
12-212	BLSDEF-A	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-213	BLSDEF-B	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-214	BLSDEF-C	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-215	BLSDEF-D	BULK LOADING SILO DISPLACEMENT EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-216	BLSW-A	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-217	BLSW-B	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-218	BLSW-C	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-219	BLSW-D	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-220	BLSE-A	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-221	BLSE-B	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-222	BLSE-C	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-223	BLSE-D	BLS LOADING EXHAUST	None	None	10 tons/hour	N/A
12-226	L17LPRF	L17 LEXAN# POWDER RECEIVER BAG FILTER	None	Filter	1.5 tons/hour	N/A
12-248	BLSABB	BULK LOADING SILO A BLENDING BLOWER	None	Filter	10 tons/hour	N/A
12-249	BLSBBB	BULK LOADING SILO B BLENDING BLOWER	None	Filter	10 tons/hour	N/A
12-250	RSH2	V-507 STORAGE HOPPER	None	None	3 tons/hour	N/A
12-253	V-1620	L16 IMPACT MODIFIER SURGE HOPPER (EXTRUDER LINE 16)	None	None	1 tons/hour	N/A
12-254	V-1720	L17 IMPACT MODIFIER SURGE HOPPER (EXTRUDER LINE 17)	None	None	1 tons/hour	N/A
12-257	FPRCS1	HOFFMAN BLOWER K-2001	None	Filter	9 tons/hour	N/A
12-258	F-1804	DUST COLLECTION SYSTEM (F1804) - WET SCRUBBER FOR L18	None	Rotoclone	2.5 tons/hour	N/A
12-259	F-1801	V-1804 RESIN BIN WITH F-1801 VENT FILTER - BIN FILTER (L18&19)	None	Filter	2.5 tons/hour	N/A
12-260	F-1802	V-1805 RESIN BIN WITH F-1802 VENT FILTER - BIN FILTER (L18&19)	None	Filter	2.5 tons/hour	N/A
12-261	V-1808A	V-1808A LEXAN# PELLET BIN	None	None	2.5 tons/hour	N/A
12-262	V-1808B	V-1808B LEXAN# PELLET BIN	None	None	2.5 tons/hour	N/A
12-263	V-1806	V-1806 LEXAN# POWDER BIN	None	None	1.5 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices (b)	Maximum Capacity (c)	Date of Construct
12-264	V-1815	V-1815 LEXAN# POWDER RECEIVER	None	Filter	1.5 tons/hour	N/A
12-265	V-1801	V-1801 RECYCLE BIN	None	None	1.875 tons/hour	N/A
12-266	V-1803	L18 V-1803 FLAME RETARDANT	None	None	2.5 tons/hour	N/A
12-267	V-1807	L18 LEXAN# V-1807 MISCELLANEOUS PELLET BIN	None	None	2.5 tons/hour	N/A
12-268	L18E	EXTRUDER FUME VENTILATION LINE 18	None	None	2.5 tons/hour	N/A
12-268	L19E	EXTRUDER FUME VENTILATION LINE 19	None	None	2.5 tons/hour	N/A
12-269	F-1901	L19 DUST COLLECTION SYSTEM (F1901) - WET SCRUBBER	None	Rotoclone	2.5 tons/hour	N/A
12-270	F-1902	V-1930 RESIN BIN WITH F-1902 VENT FILTER	None	Filter	2.5 tons/hour	N/A
12-271	V-1931	V-1931 MISCELLANEOUS PELLET BIN	None	Filter	2.5 tons/hour	N/A
12-272	V-1932	V-1932 LEXAN# POWDER BIN	None	Filter	2.5 tons/hour	N/A
12-273	V-1905	V-1905 LEXAN# POWDER RECEIVER	None	Filter	2.5 tons/hour	N/A
12-274	V-1928	L19 V-1928 FLAME RETARDANT BIN	None	None	2.5 tons/hour	N/A
12-275	V-1929	L19 V-1929 FLAME RETARDANT BIN	None	None	2.5 tons/hour	N/A
12-276	V-1902	L19 V-1902 RECYCLE BIN	None	None	2.5 tons/hour	N/A
12-277	V-1904	V-1904 IMPACT MODIFIER PELLET BIN	None	None	2.5 tons/hour	N/A
12-278	V-1906	V-1906 IMPACT MODIFIER	None	None	2.5 tons/hour	N/A
12-279	K-1902A	L18&19 K-1902 A VACUUM BLOWER	None	Filter	2.5 tons/hour	N/A
12-280	K-1902B	L18&19 K-1902 B VACUUM BLOWER	None	Filter	2.5 tons/hour	N/A
12-350	L5-13	EXTRUDER FUME VENTILATION LINES 5 TO 13 NORTH	None	None	6 tons/hour	N/A
12-352	CVACB	CENTRAL VACUUM CLEANING	None	None	60 tons/hour	N/A
12-400	L5BFDC	L5, 6, 7 DUST COLLECTOR	None	Filter	1 tons/hour	N/A
12-404	L15FGPF	LINE 15 FIBERGLASS LIW FEEDER	None	None	2 tons/hour	N/A
12-405	PDL15	LINE 15 PELLET DRYER	None	None	3.5 tons/hour	N/A
12-406	PDL16	LINE 16 PELLET DRYER	None	None	3.5 tons/hour	N/A
12-409	IMP MOD DC	IMPACT MODIFIER DUST COLLECTOR	None	Filter	3.25 tons/hour	N/A
12-411	L8-13DC	L8-13 DUST COLLECTOR SYSTEM BLOWER K-002	None	Filter	1 tons/hour	N/A
12-412	SILOJ/KVB	SILO J & K DUST COLLECTOR	None	Filter	3 tons/hour	N/A
12-413	MICASILOF K	MICA SILO FLEX KLEEN	None	Filter	2 tons/hour	N/A
12-414	L5BS	LINE 5 BLENDER SURGE HOPPER	None	None	1 tons/hour	N/A
12-415	L6BSDC	L6 BLENDER SURGE HOPPER	None	None	1 tons/hour	N/A
12-416	RBCH	BAGGER-1 BUSTED BAG RECEIVER	None	None	0.5 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices (b)	Maximum Capacity (c)	Date of Construct
12-417	CFPD1F	CONAIR / FRANKLIN DRYER	None	None	0.0855 tons/hour	N/A
12-418	CFPD2F	CONAIR / FRANKLIN DRYER	None	None	0.0855 tons/hour	N/A
12-419	L16ROTO	LINE 16 ROTOCLONE	None	None	3.75 tons/hour	N/A
12-420	L17ROTO	LINE 17 ROTOCLONE	None	None	3.75 tons/hour	N/A
12-421	L5 S/U REC	LINE 5 STARTUP RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-422	L5 RECYC	LINE 5 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-423	L5FRCF	LINE 5 FR HOPPER	None	None	2 tons/hour	N/A
12-424	L6 REC	LINE 6 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-425	L6FRCF	LINE 6 FR HOPPER	None	None	2 tons/hour	N/A
12-426	L6 S/U REC	LINE 6 STARTUP RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-427	L7 S/U REC	LINE 7 STARTUP RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-428	L8 L/KM	V920 LINE 8 MISC VESSEL	None	None	2 tons/hour	N/A
12-429	L8 S/U REC	V921 LINE 8 STARTUP VESSEL	None	None	2 tons/hour	N/A
12-436	L10 FR	L10 FLAME RETARDANT BIN	None	None	2 tons/hour	N/A
12-438	L10 REC	LINE 10 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-439	L10 S/U	LINE 10 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-440	L11REC	LINE 11 RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-441	L11S/UREC	LINE 11 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-442	L11FR	LINE 11 FR HOPPER	None	None	2 tons/hour	N/A
12-443	L12 S/U	LINE 12 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-444	L13S/U	LINE 13 S/U RECYCLE HOPPER	None	None	2 tons/hour	N/A
12-447	L18 S/U	V-1802 LINE 18 STARTUP RECYCLE VENT	None	None	3 tons/hour	N/A
12-448	L19 S/U	V-1903 LINE 19 STARTUP RECYCLE VENT	None	None	3 tons/hour	N/A
12-449	L7APH	LINE 7A PACKING HOPPER	None	None	1.5 tons/hour	N/A
12-451	L5PH	LINE 5 PACKING HOPPER	None	None	1.5 tons/hour	N/A
12-452	L6PH	LINE 6 PACKING HOPPER	None	None	1.5 tons/hour	N/A
12-453	PROD BLEND	PK1 PRODUCT BLENDER - FOR ALL LINES	None	None	3 tons/hour	N/A
12-454	L7VB	LINE 7 V - BIN	None	None	1.5 tons/hour	N/A
12-455	PK1V507	PK1 V-507	None	None	1.5 tons/hour	N/A
12-461	B1B2LEXH	B1, B2 LEXAN# PELLET HOPPER	None	None	1.5 tons/hour	N/A
12-462	A1A2LPH	A1, A2 LEXAN# PELLET HOPPER	None	None	1.5 tons/hour	N/A
12-468	PIGROTO	PIGMENT ROOM ROTOCLONE	None	None	less than 100 lbs/hr	N/A
12-471	MISC VENT	LINE 7 ROTOCLONE EXHAUST	None	None	less than 100 lbs/hr	N/A
12-477	L6 315FK	L6 315 FLEX KLEEN	None	None	2 tons/hour	N/A
12-478	L6 195FK	L6 195 BIN EXHAUST	None	None	2 tons/hour	N/A
12-480	L7 FR	L7 FIRE RESISTANT BIN	None	None	2 tons/hour	N/A
12-481	L7RECYC	L7 RECYCLE BIN	None	None	2 tons/hour	N/A
12-482	L7 315BH	LINE 7 315 BAGHOUSE	None	Filter	2 tons/hour	N/A
12-483	L7 195BH	LINE 7 195 BAGHOUSE	None	Filter	2 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices (b)	Maximum Capacity (c)	Date of Construct
12-484	L6-MICA	LINE 6 ROOF TOP MICA HOPPER	None	Filter	1 tons/hour	N/A
12-485	L10 195SEM	LINE 10 RESIN 195 HOPPER	None	Filter	2 tons/hour	N/A
12-486	L10 315BH	LINE 10 RESIN 315 HOPPER	None	Filter	2 tons/hour	N/A
12-488	L11 195BH	LINE 11 RESIN 195 HOPPER	None	Filter	2 tons/hour	N/A
12-489	L11 315BH	LINE 11 RESIN 315 HOPPER	None	Filter	2 tons/hour	N/A
12-490	CL4 RECYC	CL4 RECYCLE BIN	None	None	0.5 tons/hour	N/A
12-491	CL4FR	CL4 FIRE RESISTANT BIN	None	None	0.5 tons/hour	N/A
12-494	CL5-7FK195	CL 5195 FLEX KLEEN	None	None	0.5 tons/hour	N/A
12-495	CL5315FK	CL5 315 FLEX KLEEN	None	Filter	0.5 tons/hour	N/A
12-497	L17REC	LINE 17 RECYCLE	None	None	2.5 tons/hour	N/A
12-498	L17FR	L17 FIRE RESISTANT	None	None	2.5 tons/hour	N/A
12-499	PK3VACB	VACUUM BLOWER PK3 SYSTEM	None	Filter	4 tons/hour	N/A
12-500	V-300A	PACK 3 PELLET HOPPER 1	None	None	4 tons/hour	N/A
12-501	V-300B	PACK 3 PELLET HOPPER 2	None	None	4 tons/hour	N/A
12-502	V-300E	PACK 3 PELLET HOPPER 3	None	None	4 tons/hour	N/A
12-503	V-302A	PACK 3 PELLET HOPPER 4	None	None	4 tons/hour	N/A
12-504	V-302B	PACK 3 PELLET HOPPER 5	None	None	4 tons/hour	N/A
12-506	PK3 V-BIN	PACK 3 V-BIN (V-304)	None	None	4 tons/hour	N/A
12-507	L8AVB	LINE 8A V-BIN 830	None	None	2 tons/hour	N/A
12-508	L8BVB	LINE 8B V-BIN 840	None	None	2 tons/hour	N/A
12-509	L12VBA	LINE 12A V-BIN	None	None	1.5 tons/hour	N/A
12-510	L12VBB	LINE 12B V-BIN	None	None	1.5 tons/hour	N/A
12-511	L13VBA	LINE 13A V-BIN	None	None	1.5 tons/hour	N/A
12-512	L13VBB	LINE 13B V-BIN	None	None	1.5 tons/hour	N/A
12-515	L12 BH	LINE 12 PACKAGING HOPPER	None	None	1.5 tons/hour	N/A
12-516	L16ABH	LINE 16A BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-517	L13BH	LINE 13 PACKAGING HOPPER	None	None	1.5 tons/hour	N/A
12-518	L17ABH	LINE 17A BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-519	L15BHA	LINE 15 BAGGING HOPPER A	None	None	3.25 tons/hour	N/A
12-520	L15BHB	LINE 15 BAGGING HOPPER B	None	None	3.25 tons/hour	N/A
12-521	L18BH	LINE 18 BAGGING HOPPER	None	None	3.25 tons/hour	N/A
12-522	L17BBH	LINE 17B BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-523	L16BBH	LINE 16B BAGGING HOPPER	None	None	3.75 tons/hour	N/A
12-524	CL15-16 EF	LINE 15/16 SYSTEM/EXHAUST	None	None	0.25 tons/hour	N/A
12-526	L17-EF	LINE 17 EXHAUST FAN	None	None	0.25 tons/hour	N/A
12-533	BLS-E	BULK LOADING SILO E BIN VENT	None	None	3 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices (b)	Maximum Capacity (c)	Date of Construct
12-534	BLS-F	BULK LOADING SILO F BIN VENT	None	None	3 tons/hour	N/A
12-535	BLS-G	BULK LOADING SILO G BIN VENT	None	None	3 tons/hour	N/A
12-536	BLS-H	BULK LOADING SILO H BIN VENT	None	None	3 tons/hour	N/A
12-537	BLSDEF-E	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-538	BLSDEF-F	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-539	BLSDEF-G	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-540	BLSDEF-H	BULK LOADING SILO DIS. EXHAUST	None	Filter	less than 100 lbs/hr	N/A
12-541	BLSW-E	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-542	BLSW-F	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-543	BLSW-G	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-544	BLSW-H	BULK LOADING SILO WEIGH HOPPER	None	None	10 tons/hour	N/A
12-545	BLSE-E	BLS LOADING EXHAUST E	None	None	10 tons/hour	N/A
12-546	BLSE-F	BLS LOADING EXHAUST F	None	None	10 tons/hour	N/A
12-547	BLSE-G	BLS LOADING EXHAUST G	None	None	10 tons/hour	N/A
12-548	BLSE-H	BLS LOADING EXHAUST H	None	None	10 tons/hour	N/A
12-564	L5RBA	LINE 5 RESIN BIN A 195	None	Filter	2 tons/hour	N/A
12-565	L5RBB	LINE 5 RESIN BIN B 315	None	Filter	2 tons/hour	N/A
12-566	L7RBA	LINE 7 RESIN BIN A 195	None	Filter	2 tons/hour	N/A
12-567	L7RBB	LINE 7 RESIN BIN B 315	None	Filter	2 tons/hour	N/A
12-568	V-1930	LINE 19 RESIN BIN A 195	None	Filter	2 tons/hour	N/A
12-571	V-1926	LINE 19 PACKAGING HOPPER	None	None	2 tons/hour	N/A
12-573	V-451	LINE CL2 BAGGING HOPPER	None	None	2 tons/hour	N/A
12-574	V-450	LINE CL4 BAGGING HOPPER	None	None	2 tons/hour	N/A
12-575	V-1924	LINE 19 BAGGING HOPPER A	None	None	2 tons/hour	N/A
12-576	V-1925	LINE 19 BAGGING HOPPER B	None	None	2 tons/hour	N/A
12-578	L12FR	LINE 12 FR HOPPER	None	None	0.15 tons/hour	N/A
12-580	L12RECYC	LINE 12 RECYCLE HOPPER	None	None	0.3 tons/hour	N/A
12-584	L7BLEND	LINE 7 BLENDER	None	None	0 tons/hour	N/A
12-585	L19BLEND	LINE 19 BLENDER	None	None	1.5 tons/hour	N/A
12-588	BPC	BERRINGER PARTS CLEANER - OLD	None	None	0 tons/hour	N/A
12-589	L13FR	LINE 13 FR HOPPER	None	None	1.5 tons/hour	N/A
12-590	L13REC	LINE 13 RECYCLE HOPPER	None	None	1.5 tons/hour	N/A
12-591	L13PET	LINE 13 PET HOPPER	None	None	1.5 tons/hour	N/A
12-592	L13M	LINE 13 MISC. HOPPER	None	None	1.5 tons/hour	N/A
12-593	L11VB	LINE 11 V-BIN	None	None	1.5 tons/hour	N/A
12-594	L11BH	LINE 11 BAGGING HOPPER	None	None	1.5 tons/hour	N/A
12-596	L10VB	LINE 10 V-BIN	None	None	1.5 tons/hour	N/A
12-597	L10PH	LINE 10 PACKAGING HOPPER	None	None	1.5 tons/hour	N/A
12-599	L8LPFB	L8 LEXAN# POWDER DAY BIN BAG FILTER B	None	Filter	1.5 tons/hour	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices (b)	Maximum Capacity (c)	Date of Construct
12-600	L8KMV	V-1515B LINE 8 KM VESSEL	None	None	0.5 tons/hour	N/A
12-601	V-1913	V-1913 LEXAN# POWDER BIN	None	None	1.5 tons/hour	N/A
12-602	L18/19DC	LINE 18/19 DUST COLLECTOR	None	Filter	less than 100 lbs/hr	N/A
12-603	L8PH	V8-50 LINE PACK HOPPER	None	None	2 tons/hour	N/A
12-604	V-1403	V-1402 195 HOPPER (FINE GRINDS)	None	None	2 tons/hour	N/A
12-605	V-1407	V-1407 315 HOPPER (FINE GRINDS)	None	None	2 tons/hour	N/A
12-606	CL5FR	CL5 FR HOPPER	None	None	0.5 tons/hour	N/A
12-607	TMTCB	TMTC SILO B	None	Filter	4 tons/hour	N/A
12-608	V-1905	V-1905 LEXAN# POWDER BIN	None	None	1.5 tons/hour	N/A
12-610	BPC NEW	BERRINGER PARTS CLEANER - NEW	None	None	0 tons/hour	N/A
12-611	MDB K-100	METAL DETECTOR BLOWER K-100	None	Filter	6 tons/hour	N/A
12-612	MDB K-101	METAL DETECTOR BLOWER K-101	None	Filter	6 tons/hour	N/A
12-613	F30002	LINE 7 FR25 DUST COLLECTOR F30002	None	Filter	2 tons/hour	N/A
12-614	F30003	LINE 15 FR25 DUST COLLECTOR F30002	None	Filter	2 tons/hour	N/A
12-615	BAG2 BBR	BAGGER-2 BUSTED BAG RECEIVER	None	None	0.5 tons/hour	N/A
12-616	BAG3 BBR	BAGGER-3 BUSTED BAG RECEIVER	None	None	0.5 tons/hour	N/A
12-617	B-5000D	215 HPR BLOWER B-5000D	None	Filter	3 tons/hour	N/A
12-618	B-30001	PET TRANSFER BLOWER B-30001	None	Filter	3 tons/hour	N/A
12-619	K-3001	OFF-LINE DEMETALIZER K-3001	None	Filter	2 tons/hour	N/A
12-620	PVCS	PACKAGING VACUUM CLEANING SYSTEM	None	None	less than 100 lbs/hr	N/A
12-621	B-0201	FR SILO VACUUM BLOWER B-0201	None	Filter	3 tons/hour	N/A
12-622	L17 LPH	LINE 17 LEX POWDER HOPPER	None	None	3 tons/hour	N/A
12-623	L16 LPFR	LINE 16 LEX POWDER FILTER RECEIVER	None	Filter	3 tons/hour	N/A
12-624	L16 LPH	LINE 16 LEX POWDER HOPPER	None	None	3 tons/hour	N/A
12-625	F3150A	F3150A FINES DUST COLLECTOR	None	Filter	0.5 tons/hour	N/A
12-626	F3150B	F3150B FINES DUST COLLECTOR	None	Filter	0.5 tons/hour	N/A
12-627	F3150C	F3150C FINES DUST COLLECTOR	None	Filter	0.5 tons/hour	N/A
12-628	FH V-3000	315 FINES HOPPER V-3000	None	None	0.5 tons/hour	N/A
12-628	FH V-3002	195 FINES HOPPER V-3002	None	None	0.5 tons/hour	N/A
12-630	HB K-004	HOFFMAN BLOWER K-004	None	Filter	9 tons/hour	N/A
12-634	L7-VB	LINE 7 VACUUM BLOWER	None	Filter	2.25 tons/hour	2010

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

O.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the following emission units shall not exceed the calculated rates given in pounds per hour when operating at the maximum process weight rate shown in the table below. The pounds per hour limitations were calculated using the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
12-039	CL2RH	0.50	2.58
12-042	V-506D	2.00	6.52
12-057	V-506	2.00	6.52
12-072	SILO J	1.50	5.38
12-073	SILO K	1.50	5.38
12-137	L12RBF/A	1.20	4.63
12-138	L12RBF/B	1.20	4.63
12-142	L13RBF/A	1.20	4.63
12-143	L13RBF/B	1.20	4.63
12-145	L4CF	3.50	9.49
12-170	CSM	5.00	12.1
12-171	CSN	5.00	12.1
12-173	BCB (VLX)	5.00	12.1
12-181	CL4RBF/A	0.50	2.58
12-182	CL4RBF/B	0.50	2.58
12-185	L15RBF/A	2.50	7.58
12-186	L15RBF/B	2.50	7.58
12-188	CPC	2.50	7.58
12-189	L16RBF/A	2.50	7.58
12-190	L16RBF/B	2.50	7.58
12-193	L17RBF/A	2.50	7.58
12-194	L17RBF/B	2.50	7.58
12-196	FPRCS2	9.00	17.9
12-201	L8LPSA	1.50	5.38
12-203	L8RBF/A	2.50	7.58
12-204	L8RBF/B	2.50	7.58
12-205	L8LPF	1.50	5.38
12-206	L15-17	0.35	2.03
12-207	FCDC2	1.75	5.97
12-208	BLS-A	3.00	8.56
12-209	BLS-B	3.00	8.56

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
12-210	BLS-C	3.00	8.56
12-211	BLS-D	3.00	8.56
12-216	BLSW-A	10.00	19.2
12-217	BLSW-B	10.00	19.2
12-218	BLSW-C	10.00	19.2
12-219	BLSW-D	10.00	19.2
12-220	BLSE-A	10.00	19.2
12-221	BLSE-B	10.00	19.2
12-222	BLSE-C	10.00	19.2
12-223	BLSE-D	10.00	19.2
12-226	L17LPRF	1.50	5.38
12-248	BLSABB	10.00	19.2
12-249	BLSBBB	10.00	19.2
12-250	RSH2	3.00	8.56
12-253	V-1620	1.00	4.10
12-254	V-1720	1.00	4.10
12-257	FPRCS1	9.00	17.9
12-258	F-1804	2.50	7.58
12-259	F-1801	2.50	7.58
12-260	F-1802	2.50	7.58
12-261	V-1808A	2.50	7.58
12-262	V-1808B	2.50	7.58
12-263	V-1806	1.50	5.38
12-264	V-1815	1.50	5.38
12-265	V-1801	1.88	6.26
12-266	V-1803	2.50	7.58
12-267	V-1807	2.50	7.58
12-268	L18E	2.50	7.58
12-268	L19E	2.50	7.58
12-269	F-1901	2.50	7.58
12-270	F-1902	2.50	7.58
12-271	V-1931	2.50	7.58
12-272	V-1932	2.50	7.58
12-273	V-1905	2.50	7.58
12-274	V-1928	2.50	7.58
12-275	V-1929	2.50	7.58
12-276	V-1902	2.50	7.58
12-277	V-1904	2.50	7.58
12-278	V-1906	2.50	7.58
12-279	K-1902A	2.50	7.58
12-280	K-1902B	2.50	7.58
12-350	L5-13	6.00	13.6
12-352	CVACB	60.0	46.3
12-400	L5BFDC	1.00	4.10
12-404	L15FGPF	2.00	6.52
12-405	PDL15	3.50	9.49
12-406	PDL16	3.50	9.49
12-409	IMP MOD DC	3.25	9.03
12-411	L8-13DC	1.00	4.10
12-412	SILOJ/KVB	3.00	8.56
12-413	MICASILOFK	2.00	6.52
12-414	L5BS	1.00	4.10
12-415	L6BSDC	1.00	4.10
12-416	RBCH	0.50	2.58
12-417	CFPD1F	0.09	0.817
12-418	CFPD2F	0.09	0.817

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
12-419	L16ROTO	3.75	9.94
12-420	L17ROTO	3.75	9.94
12-421	L5 S/U REC	2.00	6.52
12-422	L5 RECYC	2.00	6.52
12-423	L5FRCF	2.00	6.52
12-424	L6 REC	2.00	6.52
12-425	L6FRCF	2.00	6.52
12-426	L6 S/U REC	2.00	6.52
12-427	L7 S/U REC	2.00	6.52
12-428	L8 L/KM	2.00	6.52
12-429	L8 S/U REC	2.00	6.52
12-436	L10 FR	2.00	6.52
12-438	L10 REC	2.00	6.52
12-439	L10 S/U	2.00	6.52
12-440	L11REC	2.00	6.52
12-441	L11S/UREC	2.00	6.52
12-442	L11FR	2.00	6.52
12-443	L12 S/U	2.00	6.52
12-444	L13S/U	2.00	6.52
12-447	L18 S/U	3.00	8.56
12-448	L19 S/U	3.00	8.56
12-449	L7APH	1.50	5.38
12-451	L5PH	1.50	5.38
12-452	L6PH	1.50	5.38
12-453	PROD BLEND	3.00	8.56
12-454	L7VB	1.50	5.38
12-455	PK1V507	1.50	5.38
12-461	B1B2LEXH	1.50	5.38
12-462	A1A2LPH	1.50	5.38
12-477	L6 315FK	2.00	6.52
12-478	L6 195FK	2.00	6.52
12-480	L7 FR	2.00	6.52
12-481	L7RECYC	2.00	6.52
12-482	L7 315BH	2.00	6.52
12-483	L7 195BH	2.00	6.52
12-484	L6-MICA	1.00	4.10
12-485	L10 195SEM	2.00	6.52
12-486	L10 315BH	2.00	6.52
12-488	L11 195BH	2.00	6.52
12-489	L11 315BH	2.00	6.52
12-490	CL4 RECYC	0.50	2.58
12-491	CL4FR	0.50	2.58
12-494	CL5-7FK195	0.50	2.58
12-495	CL5315FK	0.50	2.58
12-497	L17REC	2.50	7.58
12-498	L17FR	2.50	7.58
12-499	PK3VACB	4.00	10.4
12-500	V-300A	4.00	10.4
12-501	V-300B	4.00	10.4
12-502	V-300E	4.00	10.4
12-503	V-302A	4.00	10.4
12-504	V-302B	4.00	10.4
12-506	PK3 V-BIN	4.00	10.4
12-507	L8AVB	2.00	6.52
12-508	L8BVB	2.00	6.52
12-509	L12VBA	1.50	5.38

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
12-510	L12VBB	1.50	5.38
12-511	L13VBA	1.50	5.38
12-512	L13VBB	1.50	5.38
12-515	L12 BH	1.50	5.38
12-516	L16ABH	3.75	9.94
12-517	L13BH	1.50	5.38
12-518	L17ABH	3.75	9.94
12-519	L15BHA	3.25	9.03
12-520	L15BHB	3.25	9.03
12-521	L18BH	3.25	9.03
12-522	L17BBH	3.75	9.94
12-523	L16BBH	3.75	9.94
12-524	CL15-16 EF	0.25	1.62
12-526	L17-EF	0.25	1.62
12-533	BLS-E	3.00	8.56
12-534	BLS-F	3.00	8.56
12-535	BLS-G	3.00	8.56
12-536	BLS-H	3.00	8.56
12-541	BLSW-E	10.00	19.2
12-542	BLSW-F	10.00	19.2
12-543	BLSW-G	10.00	19.2
12-544	BLSW-H	10.00	19.2
12-545	BLSE-E	10.00	19.2
12-546	BLSE-F	10.00	19.2
12-547	BLSE-G	10.00	19.2
12-548	BLSE-H	10.00	19.2
12-564	L5RBA	2.00	6.52
12-565	L5RBB	2.00	6.52
12-566	L7RBA	2.00	6.52
12-567	L7RBB	2.00	6.52
12-568	V-1930	2.00	6.52
12-571	V-1926	2.00	6.52
12-573	V-451	2.00	6.52
12-574	V-450	2.00	6.52
12-575	V-1924	2.00	6.52
12-576	V-1925	2.00	6.52
12-578	L12FR	0.15	1.15
12-580	L12RECYC	0.30	1.83
12-584	L7BLEND	0.00	0.00
12-585	L19BLEND	1.50	5.38
12-588	BPC	0.00	0.00
12-589	L13FR	1.50	5.38
12-590	L13REC	1.50	5.38
12-591	L13PET	1.50	5.38
12-592	L13M	1.50	5.38
12-593	L11VB	1.50	5.38
12-594	L11BH	1.50	5.38
12-596	L10VB	1.50	5.38
12-597	L10PH	1.50	5.38
12-599	L8LPFB	1.50	5.38
12-600	L8KMV	0.50	2.58
12-601	V-1913	1.50	5.38
12-603	L8PH	2.00	6.52
12-604	V-1403	2.00	6.52
12-605	V-1407	2.00	6.52
12-606	CL5FR	0.50	2.58

Stack/Vent ID	Emission Unit ID	P= Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
12-607	TMTCB	4.00	10.4
12-608	V-1905	1.50	5.38
12-611	MDB K-100	6.00	13.6
12-612	MDB K-101	6.00	13.6
12-613	F30002	2.00	6.52
12-614	F30003	2.00	6.52
12-615	BAG2 BBR	0.50	2.58
12-616	BAG3 BBR	0.50	2.58
12-617	B-5000D	3.00	8.56
12-618	B-30001	3.00	8.56
12-619	K-3001	2.00	6.52
12-621	B-0201	3.00	8.56
12-622	L17 LPH	3.00	8.56
12-623	L16 LPFR	3.00	8.56
12-624	L16 LPH	3.00	8.56
12-625	F3150A	0.50	2.58
12-626	F3150B	0.50	2.58
12-627	F3150C	0.50	2.58
12-628	FH V-3000	0.50	2.58
12-628	FH V-3002	0.50	2.58
12-630	HB K-004	9.00	17.9
12-634	L7-VB	2.25	7.06

(b) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from emission units L18/19DC, BLSDEF-E, BLSDEF-F, BLSDEF-G, BLSDEF-H, PIGROTO, MISC VENT, BLSDEF-A, BLSDEF-B, BLSDEF-C, BLSDEF-D, L14EFP, FRSS, and PVCS shall not exceed 0.551 pound per hour because the process weight rate is less than one hundred (100) pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

O.1.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with O.1.1, the filters or rotoclones associated with facilities V-506D, F-1901, F-1804, SILO J, SILO K, L12RBF/A, L12RBF/B, L13RBF/A, L13RBF/B, L4CF, BCB (VLX), CL4RBF/A, CL4RBF/B, L15RBF/A, L15RBF/B, CPC, L16RBF/A, L16RBF/B, L17RBF/A, L17RBF/B, FRSS, FPRCS2, L14EFP, L8LPSA, L8RBF/A, L8RBF/B, L8LPF, FCDC2, BLS-A, BLS-B, BLS-C, BLS-D, BLSDEF-A, BLSDEF-B, BLSDEF-C, BLSDEF-D, L17LPRF, BLSABB, BLSBBB, FPRCS1, F-1801, F-1802, V-1815, F-1902, V-1931, V-1932, V-1905, K-1902A, K-1902B, L5BFDC, IMP MOD DC, L8-13DC, SILOJ/KVB, MICASILOFK, L7 315BH, L7 195BH, L6-MICA, L10 195SEM, L10 315BH, L11 195BH, L11 315BH, CL5315FK, PK3VACB, BLSDEF-E, BLSDEF-F, BLSDEF-G, BLSDEF-H, L5RBA, L5RBB, L7RBA, L7RBB, V-1930, L8LPFB, L18/19DC, TMTCB, MDB K-100, MDB K-101, F30002, F30003, B-5000D, B-30001, K-3001, B-0201, L16 LPFR, F3150A, F3150B, F3150C, HB K-004, and L7-VB shall be in operation at all times that material is being transferred into the facility.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

O.1.3 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from emission units CSM, CSN, BCB (VLX), FPRCS2, BLSE-A, BLSE-B, BLSE-C, BLSE-D, BLSABB, BLSBBB, FPRCS1, L5-13, CVACB, PK3VACB, V-300A, V-300B, V-300E, V-302A, V-302B, PK3 V-BIN, and TMTCB shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from CSM, CSN, BCB (VLX), FPRCS2, BLSE-A, BLSE-B, BLSE-C, BLSE-D, BLSABB, BLSBBB, FPRCS1, L5-13, CVACB, PK3VACB, V-300A, V-300B, V-300E, V-302A, V-302B, PK3 V-BIN, and TMTCB, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

O.1.4 Record Keeping Requirements

(a) To document the compliance status with Condition O.1.3, the Permittee shall maintain the weekly record of the visible emission notations required by Condition O.1.3(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(b) All records required to be maintained by Condition O.1.4 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Section O consists of the following Sections: O.1.

Condition O.1.4 concludes the Section O requirements of this permit

SECTION P.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: HPP Co-Polymer, Buildings 47 and 48
HPP Co-Polymer Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source or affected facility subject to the applicable regulation.

(a) The HPP Co-Polymer Area includes four miscellaneous organic chemical manufacturing units (MCPU) which are part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing units are identified as HppMONCoP1, HppMONCoP2, HppMONCoP3, and HppMONCoP4. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials specified in 40 CFR 63.2435(b)(1). MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to HppMONCoP1, HppMONCoP2, HppMONCoP3, and HppMONCoP4 are specified in Section V of this permit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

P.1.1 National Emissions Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing [40 CFR Part 63, Subpart FFFF]

The requirements of 40 CFR Part 63, Subpart FFFF specified in Section V.1 of this permit apply to the miscellaneous organic chemical manufacturing units identified as HppMONCoP1, HppMONCoP2, HppMONCoP3, and HppMONCoP4.

SECTION P.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: HPP Co-Polymer, Buildings 47 and 48

HPP Co-Polymer Operations

(b) The HPP Co-Polymer operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity[(c)]	Date of Construct
13-103	AVB	AUTOMATIQUE VACUUM BLOWER	None	None	1.0 tons/hour	1989
13-274	UTC CTC1	ULTEM# CO-POLYMER COOLING TOWER CELL 1	None	None	N/A	N/A
13-275	UTC CTC2	ULTEM# CO-POLYMER COOLING TOWER CELL 2	None	None	N/A	N/A
13-366	V-304	V-304 STORAGE VESSEL	None	None	2.27 m^3	2006
47A-001	10 CVR	10 CV REACTOR	WSC**	10 CV Condenser	N/A	1991
47A-001	40 CV FP	40 CV FREEZE POT	WSC**	40 CV Freeze Pot; 40 CV Condenser	N/A	1991
47A-002	HOT OIL	HOT OIL EXPANSION TANK	None	None	N/A	1991

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
13-001	V-221	REFRIGERATED CONDENSER*	None	None	N/A	N/A
13-004	J-302	VACUUM JET J-302 VENT - REFRIGERATED CONDENSER*	None	None	N/A	N/A
13-005	J-501	REFRIGERATED CONDENSER (WITH CARBON ADSORBER)*	None	None	N/A	N/A
13-005	J-502	REFRIGERATED CONDENSER (WITH CARBON ADSORBER)*	None	None	N/A	N/A
13-006	V-715	HOT OIL EXPANSION TANK VENTS	None	None	less than 40 m^3	N/A
13-008	A-208	BPA-DA BAG DUMP	None	None	less than 100 lb/hr	N/A
13-010	A-311	BPA-DA BAG DUMP	None	None	less than 100 lb/hr	N/A
13-015	A-713	FUGITIVE DUST COLLECTOR	None	Filter	less than 100 lb/hr	N/A
13-027	V-514	HOTWELL (V514) VENT	None	None	less than 40 m^3	N/A
13-092	V-717	HOT OIL EXPANSION TANK	None	None	less than 40 m^3	N/A
13-169	V-4008A	MOLTON POLYMER HANDLING SYSTEM	None	None	N/A	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices (b)	Maximum Capacity (c)	Date of Construct
13-250	PEWSCD	PROCESSING EQUIPMENT (WITH WATER SRUBBER AND CARBON DRUM)*	None	None	0.30 tons/hour	N/A
13-257	BF-X511	PELLETIZER RECOVERY FILTER	None	Filter	0.15 tons/hour	N/A
13-258	V-6009	MPD STORAGE TANK, V4008C	None	None	less than 40 m^3	N/A
13-259	DCS BLDG48	CENTRAL DUST COLLECTOR SYSTEM	None	Filter	less than 100 lb/hr	N/A
13-276	X-560B	VACUUM PUMP	None	None	N/A	N/A
13-362	DDDC	BPA-DA DRUMMING DUST COLLECTOR	None	Filter	less than 100 lb/hr	N/A
47A-003	DIS-8CV	DISENTRAINMENT 8CV	Carbon Canister***	8 CV Freeze Pot; 8 CV Condenser	N/A	1991

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* The amount of VOC entering each of these control devices is 2.6 lb/hr VOC or less; this amount of VOC would not trigger an air regulatory requirement to install a control device. The source has installed this equipment to reduce emissions that would otherwise not require control.
** The amount of VOC entering WSC is less than 5 tons/yr; this amount of VOC would not trigger an air regulatory requirement to install a control device; however, a water scrubber (WSC) controls emissions from 10CVR and 40 CV FP to reduce emissions that would otherwise not require control.
*** The amount of VOC entering the carbon canister is less than 0.1 tons/yr; this amount of VOC would not trigger an air regulatory requirement to install a control device.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

P.2.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
13-103	AVB	1.0	4.10
13-250	PEWSCD	0.30	1.83
13-257	BF-X511	0.15	1.15

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from A-208, A-311, A-713, DCS BLDG48, and DDDC, shall not exceed 0.551 pounds per hour because the process weight rate is less than one hundred (100) pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

P.2.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with P.2.1, the filters associated with emission units A-713, BF-X511, DCS BLDG48, and DDDC shall be in operation at all times that material is being transferred into the facility.

Section P consists of the following Sections: P.1, and P.2.

Condition P.2.2 concludes the Section P requirements of this permit

SECTION Q.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: HPP ChemOps, Buildings 58 and 59

HPP ChemOps Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source or affected facility subject to the applicable regulation.

(a) The HPP ChemOps area includes process heaters, identified as H-900 and H-900B, which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-900 and H-900B are specified in Section D of this permit.

(b) The HPP ChemOps Area includes two miscellaneous organic chemical manufacturing units (MCPU) which are part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing units are identified as HppMONMon1 and HppMONPol1. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials in 40 CFR 63.2435(b)(1). MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to HppMONMon1 and HppMONPol1 are specified in Section V of this permit.

(c) [Reserved]

(d) The affected facilities subject to 40 CFR 60, Subpart Dc are identified as H-900 and H-900B. The affected facility is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

Q.1.1 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD apply to H-900 and H-900B as specified in Section D.1 of this permit.

Q.1.2 National Emissions Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing [40 CFR Part 63, Subpart FFFF]

The requirements of 40 CFR Part 63, Subpart FFFF specified in Section V.1 and V.2 of this permit apply to the miscellaneous organic chemical manufacturing units identified as HppMONMon1 and HppMONPol1.

Q.1.3 [Reserved]

Q.1.4 [Reserved]
Q.1.5 [Reserved]

Compliance Determination Requirements

Q.1.6 [Reserved]

Q.1.7 [Reserved]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

Q.1.8 Record Keeping and Reporting Requirements

(a) [Reserved]

(b) The table that follows provides recordkeeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to the Natural gas-fired Hot Oil Heaters identified as H-900 and H-900B.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description
60.7(a)	Notification and record keeping
60.7(b)	Notification and record keeping

(c) [Reserved]

(d) All records required to be maintained by Condition Q.1.8 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(e) The Permittee shall submit the reports and records required to be submitted by Condition Q.1.8 to the address listed in Section C - General Reporting Requirements, of this permit.

SECTION Q.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: HPP ChemOps, Buildings 58 and 59

HPP ChemOps Operations

(e) The HPP ChemOps operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities(a)

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
13-042	V-500A[f]	DA HOLD TANK	None	None	57.5 m^3	1985
13-042	V-500B[f]	DA HOLD TANK	None	None	57.5 m^3	1985
13-042	C1011	TT-604, C1011 VENT HEADER	None	None	N/A	N/A
13-044	V-700	MT-701, V-700 STORAGE TANK	None	None	57.0 m^3	1985
13-046	V-730	ODCB TANK	None	None	76.3 m^3	1985
13-049	H-900	HOT OIL BURNER H900	None	None	28.8 mmBtu/hr	N/A
13-056	S-800	JC-803, S-800 TOLUENE SUMP	Condenser C801	None	N/A	N/A
13-057	V-830[f]	WASTEWATER SURGE TANK	None	None	67 m^3	1985
13-057	C-861	V840 DRUM VENT	None	None	N/A	N/A
13-058	V-904	V904 HOT OIL STORAGE	None	None	90.6 m^3	1985
13-059	V-903	V903 HOT OIL EXPANSION	None	None	N/A	N/A
13-062	PI/MMA HD	HC-612A&B SWITCH CONDENSERS	Scrubber PI/MMA HD	None	N/A	N/A
13-155	SC-1/2	NO_X CONTAINMENT SYSTEM	None	None	N/A	N/A
13-172	MS-361	PI STORAGE	None	None	N/A	N/A
13-272	ULC CTC1	HPP CHEM-OPS COOLING TOWER CELL 1	None	None	N/A	N/A
13-273	ULC CTC2	HPP CHEM-OPS COOLING TOWER CELL 2	None	None	N/A	N/A
13-279	V-790	STORAGE TANK	None	None	N/A	N/A
13-290	S-800B	TOLUENE WASTEWATER TANK	None	None	N/A	N/A
13-319	CTCC3	COOLING TOWER CELL C3	None	None	N/A	N/A
13-320	CTCC4	COOLING TOWER CELL C4	None	None	N/A	N/A
13-321	H-900B	NEW HOT OIL BURNER	None	None	31.9 mmBtu/hr	N/A
13-322	V-903B	NEW HOT OIL EXPANSION DRUM	None	None	N/A	N/A

13-323	V-904B	NEW HOT OIL STORAGE TANK	None	None	93.1 m^3	2000
13-346	C-1001[e]	VENT CONDENSER	H-2100 Oxidizer	None	N/A	N/A
13-346	C-1021[e]	VENT CONDENSER	H-2100 Oxidizer	None	N/A	N/A
13-346	S-801[e]	LIFT STATION	H-2100 Oxidizer	None	N/A	N/A
13-346	T-105[e]	WASTEWATER STRIPPER	H-2100 Oxidizer	None	N/A	N/A
13-346	V-250[f]	BI SURGE TANK	None	None	64 m^3	1985
13-346	V-240[f]	BI WATER-WASH TANK	None	None	55 m^3	1985
13-346	V-130[f]	NPI SURGE TANK	None	None	61.7 m^3	1985
13-346	V-223[f]	TOLUENE/WATER DECATNER	None	None	57.8 m^3	1985
13-346	V-273[f]	DRY TOLUENE SURGE TANK	None	None	40.1 m^3	1985
13-347	C-1001[e]	VENT CONDENSER (AOS)	None	None	N/A	N/A
13-347	C-1021[e]	VENT CONDENSER (AOS)	None	None	N/A	N/A
13-347	S-801[e]	LIFT STATION (AOS)	None	None	N/A	N/A
13-347	T-105[e]	WASTEWATER STRIPPER (AOS)	None	None	N/A	N/A
13-364	V-715	V-715 STORAGE TANK	None	None	24.6 m^3	2005
13-365	V-750B	CONTAMINATED TOLUENE TANK	Condenser C751B	None	89.0 m^3	2005

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
13-045	V-710	MPD STORAGE TANK	None	None	N/A	N/A
13-050	F-785	BPA SILO VENT FILTER	None	Filter	4.96 tons/hr	N/A
13-055	S-810	JC-802, S810 SUMP	None	None	N/A	N/A
13-060	V-965	V965 REFRIGERANT EXPANSION TANK	None	None	N/A	N/A
13-061	V-905	MS-911 TEMPERED OIL EXPANSION TANK, V-905	None	None	N/A	N/A
13-063	V-740[f]	MMA STORAGE TANK	None	None	44.4 m^3	1985
13-063	T-744	AS701 VENT SCRUBBER T744[g]	None	None	N/A	N/A
13-064	D-390	FLAKER DUST COLLECTOR	None	Filter	1.0 tons/hr	N/A
13-075	W-515	DI-AMINE WEIGH TANK	None	None	N/A	N/A
13-148	541-T	541-T RAT TANK	None	None	N/A	N/A
13-150	571-T	STORAGE TANK (86%)	None	None	N/A	N/A
13-170	BSST	BULK SALT STORAGE TANK	None	Filter	24.96 tons/hr	N/A
13-261	V-900	INCINERATOR WASTE STOR TANK	None	None	N/A	N/A
13-262	V-79T	CLOTH WASH	None	None	N/A	N/A
13-263	BF-R230MD	MANUAL DUMPER BAG FILTER	None	Filter	N/A	N/A
13-265	V-570A	PRODUCT VERIFICATION BIN	None	None	2.25 tons/hr	N/A
13-266	V-570B	PRODUCT VERIFICATION BIN	None	None	2.25 tons/hr	N/A
13-267	X-560	PELLET TRANSFER SYSTEM	None	None	2.25 tons/hr	N/A
13-270	UMDGFT	HPP MONOMER DIESEL GENERATOR TANK	None	None	N/A	N/A
13-278	F400V	F400 SYSTEM VENTILATION	None	None	N/A	N/A

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
13-284	S-810B	ODCB WASTEWATER TANK	None	None	N/A	N/A
13-340	PABDS	PA BAG DUMP STATION	None	None	Less Than 0.05 tons/hr	N/A
13-341	F-205B	BPA SURGE BIN VENT FILTER	None	Filter	3.6 tons/hr	N/A
13-342	MBLV	MAINTENANCE BLDG LOCAL VENT	None	None	N/A	N/A
13-343	MBRV	MAINTENANCE BLDG ROOF VENT	None	None	N/A	N/A
13-354	102-T/B	JACK TANK #3	None	None	N/A	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))
e. The Permittee has the option to vent emission units C-1001, C-1021, S-801, and T-105 to the oxidizer H-2100 or to the atmosphere.
f. Tanks V-500A and V-500B are part of emission unit C1011. Tanks V-273, V-250, V-240, V-130, and V-223 are part of emission unit C-1001. Tank V-830 is part of emission unit C-861. Tank V-740 is part of emission unit T-744.
g. T744 is a safety system integral to process operations and is not considered a control or recovery device.

Notes: The detailed calculations including emission factor information of the emission units included in this Section Q is treated as confidential information.

For purposes of this permit section, the pounds of steam usage and the fugitive VOC emissions which are both associated with this HPP operation are termed HppSTEAM and FUG, respectively.

Weight hopper recovery filter, identified as F-205; PA/MPD melter and charge tank, identified as V-1565B; separator, identified as KO-500; cloth wash section tank #2, identified as T-79B; and final wash receiver #2, identified as T-70B are considered trivial activities (326 IAC 2-7-1(40)) and were authorized to be built under CP-129-10588-00002, issued on August 24, 1999, but may not have been built. The V-1050 scrubber identified as V-1550 is considered inoperable. The jack tank 1, identified as 100-T, is operable and is routed to the NOx containment system, identified as SC-1/2. The jack tank 2, identified as 102-T; and the final wash receiver, identified as T-70 are considered operable and have been rerouted to the NOx containment system, identified as SC-1/2.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emissions Limitation and Standards [326 IAC 2-7-5(1)]

Q.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Pursuant to CP-129-10588-00002, Condition D.1.1(a), issued on August 24, 1999, the pounds of ULTEM# resin produced per day; water outlet temperatures; natural gas usages; pounds of steam usage (identified as HppSTEAM), scrubbant flow rate; number of vacuum systems associated with C-1021; and hours of bypass operation of the Vent Oxidizer H-2100 shall be limited such that the total amount of VOC emissions from C-1011, V-700, V-710, F-785, F-205, V-753, C-861, W-515, MS-361, V-1550, V-1565B, V-790, F-205B, V-750B (C751B), S-800, PI/MMA HD, V-730, V-904, V-903, T-744, 100-T, 102-T, T-70, SC-1/2, V-79T, F400V, KO-500, V-903B, V-904B, T-79B, T-102B, T-70B, H-900, H-900B, C-1001, C-1021, S-801, and T-105, calculated using the equations contained in Condition Q.2.13(a)(1) through (a)(8), does not exceed 195.93 tons per 365-day period, rolled on a daily basis. This limit includes fugitive VOC emissions (FUG) that are associated with the HPP process and VOC emissions that are associated with production of steam (HppSTEAM) used in producing ULTEM# resin.

(b) Pursuant to CP-129-10588-00002, Condition D.1.1(b), issued on August 24, 1999, the pounds of ULTEM# resin produced per day; water outlet temperatures; hours of bypass operation of the Vent Oxidizer H-2100; number of vacuum systems associated with C-1021; and natural gas usages, shall be limited such that the total amount of VOC emissions from C-1011, V-700, V-710, V-750B (C751B), V-971, V-730, H-900, C-1001, C-1021, S-801, and T-105, calculated using the equations contained in Condition Q.2.13(b)(1) through (b)(5), does not exceed 39.49 tons per 365-day period, rolled on daily basis.

(c) Pursuant to CP-129-10588-00002, Condition D.1.4, issued on August 24, 1999, as revised through the Title V permit, the NOx emissions from the Hot Oil Heater H-900; Hot Oil Heater H-900B; NOx Containment SC-1/2; Steam Usage identified as HppSTEAM; and the Vent Oxidizer H-2100 shall be limited such that the total amount of NOx emissions calculated using the equations contained in Condition Q.2.14(a)(1) through (a)(4), does not exceed 133.77 tons per 365-day period, rolled on daily basis.

Compliance with the requirements in Condition Q.2.1 will make 326 IAC 2-2, the Prevention of Significant Deterioration (PSD) requirements not applicable.

Q.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 and CP-129-10588-00002, Condition D.1.1(c), issued on August 23, 1999, reduction of VOC emissions from the Displacement Vent Condenser (C-1001), Exchange Vent Condenser (C1021), Lift Station (S-801), and the Wastewater Stripper (T-105) by complying with VOC limitations in Conditions Q.2.1(a) and (b), satisfies the requirements under 326 IAC 8-1-6 (General Reduction) for best available control technology (BACT).

Q.2.3 [Reserved]

Q.2.4 [Reserved]

Q.2.5 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4 the Particulate Matter emissions from the two (2) indirect heating facilities identified as H-900 and H-900B shall be limited to 0.16 lb/mmBtu and 0.15 lb/mmBtu, respectively. This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where Q = 1525.6 MMBtu/hr for H-900 and 2332.4 MMBtu/hr for H-900B

Q.2.6 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$$E = 4.10\ P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
13-050	F-785	4.96	12.0
13-064	D-390	1.00	4.10
13-170	BSST	24.96	35.4
13-265	V-570A	2.25	7.06
13-266	V-570B	2.25	7.06
13-267	X-560	2.25	7.06
13-341	F-205B	3.6	9.67

(b) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from emission unit PABDS shall not exceed 0.551 pound per hour because the process weight rate is less than one hundred (100) pounds per hour.

Q.2.7 [Reserved]

Compliance Determination Requirements

Q.2.8 Vent Oxidizer H-2100 [326 IAC 8-1-6][326 IAC 2-2]

The Vent Oxidizer H-2100 shall operate when the Displacement Vent Condenser C-1001, Exchange Vent Condenser C-1021, Lift Station S-801, or the Water Stripper T-105 is in operation as necessary to comply with Conditions Q.2.1(a), Q.2.1(b), and Q.2.2.

Q.2.9 [Reserved]

Q.2.10 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-2]

In order to demonstrate compliance with Condition Q.2.1(c), the Permittee shall:

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), calibrate, maintain, and operate a continuous monitoring system which meets the performance specifications of 326 IAC 3-5-2 for the following emission units:

(1) NOx Containment System, SC-1/2 vent (SV13-155); and

(2) [Reserved]

(3) NE BOILER (SV01-101); H BOILER (SV01-100); and BW-GAS BOILER (SV01-014) described in Section D. The continuous emissions monitoring for NE BOILER, H BOILER, and BW-GAS BOILER also demonstrates compliance with Conditions D.2.1 and D.2.2 as specified in Condition D.2.5.

(b) Install, calibrate, maintain, and operate a stack gas flowmeter on the NOx Containment System, SC-1/2 vent SV13-155.

Q.2.11 Operating Parameters

To determine compliance with Condition Q.2.1(a) and/or Q.2.1(b), the following control units shall be monitored as detailed below:

Stack/Vent	Emission Unit	Control Unit	Operating Parameters
13-365	V-750B	Condenser C751B	Tempered water outlet temperature will be monitored at least once every 15 minutes when the emission unit is in operation and VOC emissions calculated pursuant to Conditions Q.2.12(a) and Q.2.12(b).
13-056	S-800	Condenser C801	Tempered water outlet temperature will be monitored at least once every 15 minutes when the emission unit is in operation and VOC emissions calculated pursuant to Condition Q.2.12(a).
13-062	PI/MMA HD	Scrubber	Scrubbant water flow rate (gpm) will be monitored at least once every 15 minutes when the emission unit is in operation and VOC emissions calculated pursuant to Condition Q.2.12(a).

Q.2.12 Performance Testing [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

In order to determine compliance with Condition Q.2.1:

(a) The Permittee shall perform VOC testing on V-750B to verify the emission factors and constants using methods as approved by the Commissioner.

(b) The Permittee shall perform VOC and NOx testing on H-2100, S-800, and PI/MMA HD to verify the applicable emission factors and constants using methods approved by the Commissioner.

(c) [Reserved]

These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Q.2.13 VOC Emissions Calculations

(a) For purposes of determining compliance with Condition Q.2.1(a), the daily VOC emissions shall be calculated as the sum of the daily emissions calculated by equations (1) through (8) as follows:

(1) The daily VOC emissions from each of the 14 following emissions units (C-1011, SV13-042; V-700, SV13-044; V-710, SV13-045; F-785, SV13-050; F-205, SV13-051; V-753, SV13-054; C-861, SV13-057; W-515, SV13-075; MS-361, SV13-172; V-1550, SV13-283; V-1565B, SV13-285; V-790, SV13-279; F-205B, SV13-341; and FUG, SV13-FUG) are based on the following equation:

VOC Emissions = (lb. ULTEM# resin produced/day) x emission factor (lb. VOC/lb. ULTEM# resin produced) + constant (lb. VOC/day).

(2) The daily VOC emissions from the following emission unit (V-750B (C751B), SV13-365) are based on the following equation:

VOC Emissions = constant x (lb. ULTEM# resin produced/day) x e exp(constant x water outlet temperature (degrees Celsius)).

(3) The daily VOC emissions from the following emissions unit (S-800, SV13-056) are based on the following equation:

VOC Emissions = constant x e exp(constant x water outlet temperature (degrees Celsius)).

(4) The daily VOC emissions from the following emissions unit (PI/MMA HD, SV13-062) are based on the following equation:

VOC Emissions = constant x e exp(constant/(scrubbant flow rate (lb/hr)) exp(constant)).

(5) The daily VOC emissions from each of the 16 following emissions units (V-730, SV13-046; V-904, SV13-058; V-903, SV13-059; T-744, SV13-063; 100-T, 13-360 (formerly SV13-141A); 102-T, SV13-361 (formerly SV13-141B); T-70, SV13-152; SC-1/2, SV13-155; V-79T, SV13-262; F400V, SV13-278; KO-500, SV13-317; V-903B, SV13-322; V-904B, SV13-323; T-79B, SV13-353; T-102B, SV13-354; T-70B, SV13-356) are based on the following equation:

VOC Emissions = constant (lb. VOC/day).

(6) The daily VOC emissions from each of the 2 following emissions units (H-900, SV13-049; and H-900B, SV13-321) are based on the following equation:

VOC Emissions = (scf natural gas used/day) x emissions factor (lb. VOC/scf natural gas).

(7) The daily VOC emissions from the steam usage at the ULTEM# resin operation (HppSTEAM) are based on the following equation:

VOC Emissions = (lb. steam usage at ULTEM# resin operation/day) x emissions factor (lb. VOC/lb. steam usage) + constant (lb. VOC/day).

(8) Whenever the Displacement Vent Condenser C-1001, Exchange Vent Condenser C-1021, Lift Station S-801, or the Water Stripper T-105 is vented to both the atmosphere and the Vent Oxidizer H-2100 during the day, the Permittee shall sum the VOC emitted during such day as follows:

VOC Emissions = [[[(lb. ULTEM# resin produced/day) x SV13-346 emissions factor (lb. VOC/lb. ULTEM# resin produced) +

constant (lb. VOC/day)] + (constant (lb VOC/day) x (number of vacuum systems associated with C-1021)) - constant (lb VOC/day)] x (hours/day flow vented to SV13-346) x (1 day/24 hours)] + [[[(lb. ULTEM# resin produced/day) x SV13-347 emissions factor (lb. VOC/lb. ULTEM# resin produced) + constant (lb. VOC/day)] + (constant (lb VOC/day) x (number of vacuum systems associated with C-1021)) - constant (lb VOC/day)] x (hours/day flow vented to SV13-347) x (1 day/24 hours)] + [for SV13-346 only] (scf natural gas used/day) x emission factor (lb. VOC/scf natural gas). The emission factor for SV13-346 is assumed to be 0.05 times the emission factor for SV13-347, reflecting an overall control efficiency of 95%. Performance testing conducted as required by this permit will establish the actual destruction efficiency that should be used when calculating the emission factor for SV13-346.

(b) For purposes of determining compliance with Condition Q.2.1(b), the daily VOC emissions shall be calculated as the sum of the following:

(1) The daily VOC emissions from each of the 3 following emissions units (C-1011, SV13-042; V-700, SV13-044; V-710, SV13-045) are based on the following equation:

VOC Emissions = (lb. ULTEM# resin produced/day) x emission factor (lb. VOC/lb. ULTEM# resin produced) + constant (lb. VOC/day).

(2) The daily VOC emissions from the following emissions unit (V-750B (C751B), SV13-365) are based on the following equation:

VOC Emissions = constant x (lb. ULTEM# resin produced/day) x e exp(constant x water outlet temperature (degrees Celsius)).

(3) The daily VOC emissions from the following emissions unit (V-730, SV13-046) are based on the following equation:

VOC Emissions = constant (lb. VOC/day).

(4) The daily VOC emissions from the following emissions unit (H-900, SV13-049) are based on the following equation:
VOC Emissions = (scf natural gas used/day) x emissions factor (lb. VOC/scf natural gas).

(5) Whenever the Displacement Vent Condenser C-1001, Exchange Vent Condenser C-1021, Lift Station S-801, or the Water Stripper T-105 is vented to

both the atmosphere and the Vent Oxidizer H-2100 during the day, the Permittee shall sum the VOC emitted during such day as follows:

VOC Emissions = [[[(lb. ULTEM# resin produced/day) x SV13-346 emissions factor (lb. VOC/lb. ULTEM# resin produced) + constant (lb. VOC/day)] + (constant (lb VOC/day) x (number of vacuum systems associated with C-1021)) - constant (lb VOC/day)] x (hours/day flow vented to SV13-346) x (1 day/24 hours)] +[[[(lb. ULTEM# resin produced/day) x SV13-347 alternate emissions factor (lb. VOC/lb. ULTEM# resin produced) + constant (lb. VOC/day)] + (constant (lb VOC/day) x (number of vacuum systems associated with C-1021)) - constant (lb VOC/day)] x (hours/day flow vented to SV13-347) x (1 day/24 hours)]. The emission factor for SV13-346 is assumed to be 0.05 times the emission factor for SV13-347, reflecting an overall control efficiency of 95%. Performance testing conducted as required by this permit will establish the actual destruction efficiency that should be used when calculating the emission factor for SV13-346.

Q.2.14 Nitrogen Oxides (NOx)

(a) For purposes of determining compliance with Condition Q.2.1(c), the daily NOx emissions shall be calculated as the sum of the daily emissions calculated using the equations in paragraphs (a)(1) through (4) as follows:

(1) The daily NOx emissions from each of the two following emissions units (H-900, SV13-049; and H-900B, SV13-321) are based on the following equation:

NOx Emissions = (scf natural gas used/day) x emissions factor (lb. NOx /scf natural gas).

(2) The daily NOx emissions from the following emission unit SC-1/2, SV13-155 are based on the following equation:

NOx Emissions = constant (lb. NOx /ppmv x acf) x concentration of NOx in stack (ppmv) x stack flow (acf).

(3) The daily NOx emissions from the steam usage at the ULTEM# resin operation (HppSTEAM) are based on the following equation:

NOx Emissions = (lb. steam usage at ULTEM# resin operation/day) x (∑i=1-3 (lbs. NOx from boiler i/MMBtu heat input at boiler i) x (scf natural gas used at boiler i) x (0.001024 MMBtu/scf natural gas))/(∑i=1-3 (lbs. steam produced by boiler i)), where “boiler i” represents the NE BOILER (SV01-101),

the H BOILER (SV01-100), and the BW-GAS BOILER (SV01-014).

(4) The daily NOx emissions from control device (H-2100, SV13-346), which controls emission units, (C-1001, C-1021, T-105, S-801), SV13-346) are based on the following equation:

NOx Emissions = [(scf natural gas used/day) x emission factor (lb NOx /scf natural gas)] + [(constant (lb TEA/day) x (number of vacuum systems associated with C-1021) - constant (lb TEA/day)) x emissions factor (lb NOx /lb TEA) x (hours/day flow vented to SV 13-346) x (1 day/24 hours)].

The sum of the NOx emissions from each of the emissions units above will equal the total daily NOx emissions from the ULTEM# resin operation.

(b) The source may install a low- NOx burner for either or both of the Hot Oil Heaters. Corresponding low- NOx burner emission factors will be utilized in the NOx emissions calculations under Condition Q.2.14(a).

Q.2.15 [Reserved]

Q.2.16 [Reserved]

Q.2.17 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Q.2.6, the filters associated with facilities F-785, D-390, BSST, and F-205B shall be in operation at all times that material is being transferred into the facility except that filter operation is not required when only liquid is being transferred into BSST.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Q.2.18 Vent Oxidizer H-2100 Operating Temperature

When Vent Oxidizer H-2100 is used to demonstrate compliance with Conditions Q.2.1(a) and Q.2.1(b), it shall maintain an operating temperature of 650 degrees Fahrenheit (°F) or the temperature determined in the most recent performance test that is the basis for the destruction efficiency used in the equations pursuant to Conditions Q.2.13(a)(8) and Q.2.13(b)(5). The temperature of the exhaust from the vent oxidizer shall be recorded at least once each minute whenever it is operating and used to meet emission limits. When for any three (3) hour average reading (arithmetic average of three contiguous one-hour periods), the operating temperature average is below the established minimum temperature, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Conditions Q.2.1(a), and Q.2.1(b) of this permit Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Q.2.19 [Reserved]

Q.2.20 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from emission units F-785 and BSST shall be performed once per week during normal daylight operations when exhausting to the atmosphere, except for weeks when transfer of solid material does not occur. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from F-785 and BSST, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

Q.2.21 Record Keeping and Reporting Requirements

(a) To determine the compliance status with the 365-day rolling totals for VOC and NOx emissions set forth in Condition Q.2.1, the Permittee shall maintain records in accordance with (1) through (10) below:

(1) The tempered water outlet temperature on each of vent condensers C751B and C801 (each measured as a daily average, with at least one measurement on each condenser per hour for each day when the unit is in operation);

(2) The rate of the scrubbant water flow at the vent scrubber on emission unit PI/MMA HD (measured as a daily average, with at least one measurement per hour for each day when the unit is in operation);

(3) The amount of ULTEM# resin produced for each calendar day;

(4) The stack flow rate (acf) of, and the NOx concentration (ppmv) in, the vent stream from the NOx containment system SC-1/2 (SV13-155) (each measured as a daily average, with at least one measurement of each per hour for each day when the unit is in operation);

(5) When the Displacement Vent Condenser C-1001, Exchange Vent Condenser C-1021, Lift Station S-801, or the Water Stripper T-105 is vented to the Vent

Oxidizer H-2100, a log of the date, time and duration that the Vent Oxidizer H-2100 is operated and is bypassed;

(6) Amounts of natural gas fuel used by each of the existing hot oil heater H-900, the new hot oil heater H-900B, the Vent Oxidizer H-2100, the NE BOILER (SV01-101), the H BOILER (SV01-100), and the BW-GAS BOILER (SV01-014) for each calendar day when such unit is in operation;

(7) The pounds of steam produced each calendar day from each of the NE BOILER (SV01-101), the H BOILER (SV01-100), and the BW-GAS BOILER (SV01-014);

(8) Steam usage at the ULTEM# plant for each calendar day;

(9) The number of vacuum systems associated with C-1021; and

(10) The pounds NOx per MMBtu heat input (calculated as the daily average of the hourly averages) from each of the NE BOILER (SV01-101), the H BOILER (SV01-100), and the BW-GAS BOILER (SV01-014) for each day when such boiler is in operation.

(b) [Reserved]

(c) [Reserved]

(d) Pursuant to 40 CFR 60.48c(g), Subpart Dc, the Permittee shall record and maintain records of the amounts of each fuel combusted during each month for emission units H-900 and H-900B. If an alternative record keeping requirement is approved by the Administrator in lieu of this condition, the Permittee shall comply with the alternative record keeping requirement upon approval from the Administrator and shall submit an application for a permit modification to IDEM, OAQ to incorporate the approved alternative record keeping into the Part 70 Operating Permit.

(e) Pursuant to 326 IAC 12, the Permittee shall maintain records of the dimensions and an analysis showing the capacity of storage tank V-750B. These records shall be maintained for the life of the source.

(f) [Reserved]

(g) To document the compliance status with Condition Q.2.20, the Permittee shall maintain the weekly record of the visible emission notations required by Condition Q.2.20(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(h) All records required to be maintained by Condition Q.2.21 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(i) A quarterly summary of the information to document the compliance status with Condition Q.2.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

Q.2.22 [Reserved]

Section Q consists of the following Sections: Q.1, Q.2, and three (3) Part 70 Quarterly Reporting Forms.

Condition Q.2.22 concludes the Section Q requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY

COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition Q.2.1(a)
Facility: C-1011, V-700, V-710, F-785, F-205, V-753, C-861, W-515, MS-361, V-1550, V-1565B, V-790, F-205B, V-750B (C751B), S-800, PI/MMA HD, V-730, V-904, V-903, T-744, 100-T, 102-T, T-70, SC-1/2, V-79T, F400V, KO-500, V-903B, V-904B, T-79B, T-102B, T-70B, H-900, H-900B, C-1001, C-1021, S-801, T-105, Steam Usage (identified as HppSTEAM), and fugitive VOC emissions (FUG) that are associated with the HPP process.
Parameter: VOC
Limit: The VOC emissions shall not exceed 195.93 tons rolled on a 365-day basis

Month: _____ **Year:** _____

Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365 - day period	Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365 - day period
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			**TOTAL**		

Note: This Report Form shall be submitted with a detail emissions calculation spreadsheet.

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY

COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition Q.2.1(b)
Facilities: C-1011, V-700, V-710, V-750B (C751B), V-730, H-900, C-1001, C-1021, S-801, and T-105
Parameter: VOC
Limit: The VOC emissions shall not exceed 39.49 tons rolled on a 365-day basis

Month: _____ **Year:** _____

Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365 - day period	Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365 - day period
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			**TOTAL**		

Note: This Report Form shall be submitted with a detail emissions calculation spreadsheet.

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition Q.2.1(c)
Facility: Hot Oil Heaters H-900, H-900B; NOx Containment System SC-1/2; Vent oxidizer H-2100; Steam Usage (identified as HppSTEAM); and C-1021
Parameter: NOx
Limit: The NOx emissions shall not exceed 133.77 tons rolled on a 365-day basis

Month: _____ **Year:** _____

Day	NO_X Emissions this day (ton/day)	NO_X Emissions for the last 365 - day period	Day	NO_X Emissions this day (ton/day)	NO_X Emissions for the last 365 - day period
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			**TOTAL**		

Note: This Report Form shall be submitted with a detail emissions calculation spreadsheet showing the breakdown of fuel, feed rates, and actual NOx monitor reading from each facility.

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

SECTION R.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: HPP Finishing, Building 62

HPP Finishing Operations

(a) The HPP Finishing operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity[c]	Date of Construct
13-035	DC-08	LARGE FINE GRINDER	None	None	0.60 tons/ hour	N/A

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [b]	Maximum Capacity [c]	Date of Construct
13-070	B-02	B-02 BLOWER	None	Filter	3.78 tons/ hour	1985
13-071	B-01	B-01 BLOWER	None	Filter	3.78 tons/ hour	1985
13-154	C1 DHE	C1 DIE HEAD EXHAUST	None	None	Less than 0.05 tons/hour	N/A
13-165	L-3	PELLET TRANSFER	None	Filter	1.25 tons/ hour	N/A
13-166	L-4	PELLET TRANSFER	None	Filter	1.25 tons/ hour	N/A
13-167	RTV	RESIN TRANSFER VENT	None	Filter	2.50 tons/ hour	N/A
13-168	FPT	FINISHED PRODUCT TRANSFER	None	Filter	1.25 tons/ hour	N/A
13-251	BF-L1	LINE 1 PELLET TRANSFER	None	Filter	0.23 tons/ hour	N/A
13-252	BF-L2	LINE 2 PELLET TRANSFER	None	Filter	0.23 tons/ hour	N/A
13-254	BF-NFG	EAST FINE GRINDER	None	Filter	0.60 tons/ hour	N/A
13-255	CLDC	COLOR LAB DUST COLLECTION	None	Filter	0.07 tons/ hour	N/A
13-256	A/B - FG	WEST FINE GRINDER	None	Filter	1.20 tons/ hour	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

R.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
13-035	DC-08	0.60	2.91
13-070	B-02	3.78	9.99
13-071	B-01	3.78	9.99
13-165	L-3	1.25	4.76
13-166	L-4	1.25	4.76
13-167	RTV	2.50	7.58
13-168	FPT	1.25	4.76
13-251	BF-L1	0.23	1.53
13-252	BF-L2	0.23	1.53
13-254	BF-NFG	0.60	2.91
13-255	CLDC	0.07	0.690
13-256	A/B - FG	1.20	4.63

(b) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from emission unit C1DHE shall not exceed 0.551 pound per hour because the process weight rate is less than one hundred (100) pounds per hour. If the process weight rate for emission unit C1DHE becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

R.1.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with R.1.1, the filters associated with facilities B-02, B-01, L-3, L-4, RTV, FPT, BF-L1, BF-L2, BF-NFG, CLDC, and A/B - FG shall be in operation at all times that material is being transferred into the facility.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

R.1.3 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust for emission units B-02 and B-01 shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhausts from B-02 and B-01, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

R.1.4 Record Keeping Requirements

(a) To document the compliance status with Condition R.1.3, the Permittee shall maintain the weekly record of the visible emission notations required by Condition R.1.3(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(b) All records required to be maintained by Condition R.1.4, shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Section R consists of the following Sections: R.1.

Condition R.1.4 concludes the Section R requirements of this permit

SECTION S.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Emergency Generators and Pumps, Entire Plant Site

Emergency Generators and Pumps

(a) The site generators and pumps listed below are considered the emergency generators and pumps identified as a group, 17-Emer-G. Each emergency generator or pump which is associated with this group is individually identified with an affiliated stack/vent I.D; plant location; date in which the emergency generator or pump was installed; rated horsepower (hp); and heat input.

Stack / Vent I.D	Plant Location	Date Installed	Rated HP	MMBTU/hr
GENERATORS				
17-101	Phenol	Jun-83	760	5.3
17-102	Phenol	Oct-83	450	3.2
17-103	MWTP	Aug-82	900	6.3
17-104	BPA III	Apr-86	1490	10.4
17-105	LEXAN# Resin	Nov-86	1770	12.4
17-106	LEXAN# Resin	Nov-86	1770	12.4
17-107	LEXAN# Resin	Jun-79	930	6.5
17-108	BPA I & II	Feb-82	17	0.1
17-110	LDF	Sep-86	760	5.3
17-111	LDF	Sep-86	760	5.3
17-112	Phosgene	May-80	1600	11.2
17-113	Phosgene	Oct-86	1490	10.4
17-114	Brine	Dec-85	1770	12.4
17-115	Brine	Jan-87	1770	12.4
17-120	ETS	1991	119	0.8
17-121	ULTEM# Monomer	May-90	900	6.3
17-129[(a)]	Sheet Products	1980	10	0.1
17-130	Sheet Products	Mar-95	60	0.4
17-134	CPP Resin II	Jan-95	1503	10.5
17-135	Bldg. 46 ECC	Feb-96	120	0.8
17-410	Visitor Center	1999	158	1.1
PUMPS				
17-302	Phenol	Jun-90	280	2
17-303	Phenol	Jun-90	280	2
17-304	Phenol	Jun-90	280	2
17-411	Mil Water Diesel Pump	1999	300	2.1
17-412	Mil Water Diesel Pump	1999	300	2.1
17-413	Mil Water Diesel Pump	1999	300	2.1
FIRE PUMPS				
17-403	CT#2	1970	220	1.5
17-404	CT#2	1970	220	1.5
17-405	MWTP/BPA	Jan-74	280	2
17-406	MWTP/Bldg. 18	Jun-78	310	2.2
17-407	MWTP/Bldg. 18	Jun-78	310	2.2
17-408	Safety/Phenol	Apr-89	340	2.4
17-409	Safety/Phenol	Apr-89	340	2.4

(a) Stack/Vent ID 17-129 is associated with a gasoline emergency generator; all other emergency generators or pumps listed in this table burn diesel.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

S.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to Construction Permit CP 129-3607-00002, issued on August 18, 1994, as revised through the Title V permit, the NOx emissions from the combustion of diesel fuel for the group of emergency generators and pumps, identified as 17-Emer-G, shall not exceed 39.5 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit will ensure that oxides of nitrogen (NOx) emissions are less than 40 tons per twelve (12) consecutive month period and make 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

S.1.2 NOx Limit Compliance Determination

For purposes of determining compliance with the NOx limit described in Condition S.1.1, the Permittee shall determine the monthly NOx emissions using the equation below:

NOx emissions (tons/month) = (EF_1) x [1 ton/2000 lbs] x [actual diesel fuel usage (gallons/month)] x [137,000 Btu/gallon diesel]

Where: EF_1 = 4.41 lb NOx /MMBtu or the emission factor determined from emissions testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

S.1.3 Record Keeping Requirements

(a) To document the compliance status with Condition S.1.1 the Permittee shall maintain monthly records of actual diesel fuel usage for the group of emergency generators and pumps, identified as 17-Emer-G. The Permittee may determine actual diesel fuel usage by quantity of the fuel input to the group of emergency generators and pumps identified as 17-Emer-G.

(b) All records required to be maintained by Condition S.1.3 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

S.1.4 Reporting Requirements

A quarterly summary of monthly NOx emissions to document the compliance status with Condition S.1.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION S.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Emergency Generators and Pumps, Entire Plant Site

Standby Energy Curtailment Generators and Mobile Diesel Units

(b) The generators and mobile diesel units listed below are considered the energy curtailment generators and mobile diesel units identified as a group, 17-S_M-G. Each energy curtailment generator or mobile diesel unit which is associated with this group is individually identified with an affiliated stack/vent I.D; plant location; date in which the energy curtailment generator or mobile diesel unit was installed; rated horsepower (hp); and heat input.

Stack / Vent I.D	Plant Location	Date Installed	Rated HP	MMBTU/hr
STANDBY ENERGY CURTAILMENT DIESEL GENERATORS AND MOBILE DIESEL UNITS				
17-116	CPP Resin III	1984	1580	11.2
17-117	CPP Resin III	1984	1580	11.2
17-118	WWTP Lift Station	1990	2220	15.7
17-119	WWTP Lift Station	1990	2220	15.7

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

S.2.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to Construction Permit CP 129-3607-00002, issued on August 18, 1994, as revised through the Title V permit, the NOx emissions from the combustion of diesel fuel for the group of energy curtailment generators and mobile diesel units identified as a group, 17-S_M-G, shall not exceed 39.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit will ensure that oxides of nitrogen (NOx) emissions are less than 40 tons per twelve (12) consecutive month period and make 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

S.2.2 NOx Limit Compliance Determination

For purposes of determining compliance with the NOx limit described in Condition S.2.1, the Permittee shall determine the monthly NOx emissions using the equation below:

NOx emissions (tons/month) = (EF_2) x [1 ton/2000 lbs] x [actual diesel fuel usage (gallons/month)] x [137,000 Btu/gallon diesel]

Where: EF_2 = 3.2 lb NOx /MMBtu or the emission factor determined from emissions testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

S.2.3 Record Keeping Requirements

(a) To document the compliance status with Condition S.2.1 the Permittee shall maintain monthly records of actual diesel fuel usage for the group of energy curtailment generators and mobile diesel units identified as 17-S_M-G. The Permittee may determine actual fuel usage by quantity of the fuel input to the group of emergency generators and pumps identified as 17-S_M-G.

(b) All records required to be maintained by Condition S.2.3 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

S.2.4 Reporting Requirements

A quarterly summary of monthly NOx emissions to document the compliance status with Condition S.2.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION S.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Emergency Generators and Pumps, Entire Plant Site

Temporary, Portable, Emergency Generators

(c) The generators listed below represent temporary, portable, emergency generators. Each emergency generator is individually identified with an affiliated stack/vent I.D.; plant location, rated horsepower (hp); and heat input. Generator units may vary depending upon which units are available when needed.

Stack / Vent I.D	Emission Unit	Plant Location	Maximum Capacity	Heat Input Capacity (MMBtu/hr)
17-500	Generator 17-500	AS NEEDED	2,332 HP	15.22
17-501	Generator 17-501	AS NEEDED	2,332 HP	15.22

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

S.3.1 Emergency Generator Service

The emergency generators to which this section applies shall be limited as provided below:

(a) Each generator shall be limited to less than 500 hours of operation per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Each generator shall operate on No. 2 diesel fuel.

SECTION S.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Stationary Internal Combustion Engines (ICE), Entire Plant Site

Plant-Existing, New, Modified or Reconstructed Stationary ICE Affected Facilities/Sources

This section lists the provisions of National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to any existing, new, modified, or reconstructed affected source subject to the applicable regulation.

The table lists emission units that are stationary internal combustion engines.

Stack / Vent I.D	Plant Location	Fuel	Type of ICE*	Rated HP
GENERATORS				
17-101	Phenol	Diesel	CI	760
17-102	Phenol	Diesel	CI	450
17-103	MWTP	Diesel	CI	900
17-104	BPA III	Diesel	CI	1490
17-105	LEXAN# Resin	Diesel	CI	1770
17-106	LEXAN# Resin	Diesel	CI	1770
17-107	LEXAN# Resin	Diesel	CI	930
17-108	BPA I & II	Diesel	CI	17
17-110	LDF	Diesel	CI	760
17-111	LDF	Diesel	CI	760
17-112	Phosgene	Diesel	CI	1600
17-113	Phosgene	Diesel	CI	1490
17-114	Brine	Diesel	CI	1770
17-115	Brine	Diesel	CI	1770
17-120	ETS	Diesel	CI	119
17-121	ULTEM# Monomer	Diesel	CI	900
17-129	Sheet Products	Gasoline	SI	10
17-130	Sheet Products	Diesel	CI	60
17-134	CPP Resin II	Diesel	CI	1503
17-135	Bldg. 46 ECC	Diesel	CI	120
17-410	Visitor Center	Diesel	CI	158
PUMPS				
17-302	Phenol	Diesel	CI	280
17-303	Phenol	Diesel	CI	280
17-304	Phenol	Diesel	CI	280
17-411	Mil Water Diesel Pump	Diesel	CI	300
17-412	Mil Water Diesel Pump	Diesel	CI	300
17-413	Mil Water Diesel Pump	Diesel	CI	300
FIRE PUMPS				
17-403	CT#2	Diesel	CI	220
17-404	CT#2	Diesel	CI	220
17-405	MWTP/BPA	Diesel	CI	280
17-406	MWTP/Bldg. 18	Diesel	CI	310
17-407	MWTP/Bldg. 18	Diesel	CI	310

Stack / Vent I.D	Plant Location	Fuel	Type of ICE*	Rated HP
17-408	Safety/Phenol	Diesel	CI	340
17-409	Safety/Phenol	Diesel	CI	340
STANDBY ENERGY CURTAILMENT DIESEL GENERATORS AND MOBILE DIESEL UNITS				
17-116	CPP Resin III	Diesel	CI	1580
17-117	CPP Resin III	Diesel	CI	1580
17-118	WWTP Lift Station	Diesel	CI	2220
17-119	WWTP Lift Station	Diesel	CI	2220
17-134	Medical	Diesel	CI	2161

* CI = Combustion Ignition; SI = Spark Ignition
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

S.4.1 National Emissions Standards for Hazardous Air Pollutants Under 40 CFR Part 63 [40 CFR Part 63, Subpart A][326 IAC 20-1]

The provisions of 40 CFR 63, Subpart A - General Provisions apply to affected sources except when otherwise specified in 40 CFR 63, Subpart ZZZZ.

S.4.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ] [326 IAC 20-82]

For existing sources, the Permittee shall comply with the applicable provisions of 40 CFR 63, Subpart ZZZZ by May 3, 2013. For new or reconstructed sources, the Permittee shall comply with the applicable provisions of 40 CFR 63, Subpart ZZZZ upon startup of an affected source.

S.4.3 Standards of Performance for New Stationary Sources Under 40 CFR Part 60 [40 CFR Part 60, Subpart A][326 IAC 12-1]

The provisions of 40 CFR 60, Subpart A - General Provisions apply to the affected facility except when otherwise specified in 40 CFR 60, Subpart IIII and Subpart JJJJ.

S.4.4 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart IIII] [326 IAC 12-1]

The Permittee shall comply with the applicable provisions of 40 CFR 60, Subpart IIII upon commencing construction of a stationary compression ignition (CI) ICE described at 40 CFR 60.4200(a)(2) after July 11, 2005, or reconstructing or modifying a stationary CI ICE after July 11, 2005.

S.4.5 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60, Subpart JJJJ] [326 IAC 12-1]

The Permittee shall comply with the applicable provisions of 40 CFR 60, Subpart JJJJ upon commencing construction of a stationary spark ignition (SI) ICE described at 40 CFR 60.4230(a)(4) after June 12, 2006, or commencing reconstruction or modification of a SI ICE after June 12, 2006.

Section S consists of the following Sections: S.1, S.2, S.3, S.4 and two (2) Part 70 Quarterly Reporting Forms.

Condition S.4.5 concludes the Section S requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY

COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition S.1.1
Facility: Emergency Generators and Pumps identified as17-Emer-G
Parameter: NOx emissions
Limit: the NOx emissions shall not exceed 39.5 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY

COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition S.2.1
Facility: Energy Curtailment Generators and Mobil Diesel Units identified as17-S_M-G
Parameter: NOx emissions
Limit: the NOx emissions shall not exceed 39.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____ QUARTER: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

SECTION T.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: High Bay, Building 1A

High Bay Operations

(a) The High Bay operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D, the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
18-001	R104OD	ROOM 104 OVEN DRYERS	None	None	less than 100 lbs/hr	N/A
18-002	R102E	ROOM 102 EXTRUDERS	None	None	less than 100 lbs/hr	N/A
18-004	PRODEX S4E	PRODEX S-4 EXTRUDER	None	None	less than 100 lbs/hr	N/A
18-005	EGAN S5	EGAN S-5 EXTRUDER	None	None	less than 100 lbs/hr	N/A
18-006	HPM(S6)E	HPM S-6 EXTRUDER	None	None	less than 100 lbs/hr	N/A
18-007	R105/102VB	R105/102 VACUUM BLOWER	None	None	less than 100 lbs/hr	N/A
18-008	R103BVS	LEXAN# BLEND ROOM AND POWDER TRANSFER	None	Baghouse	less than 100 lbs/hr	N/A
18-010	R102EV	ROOM 102 EXTRUDERS VACUUM	None	None	less than 100 lbs/hr	N/A
18-011	B1BMMO	BLDG. 1B MOLDING MACHINES/OVENS	None	None	less than 100 lbs/hr	N/A

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

T.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from emission units R104OD, R102E, PRODEX S4E, EGAN S5, HPM(S6)E, R105/102VB, R103BVS, R102EV, and B1BMMO shall not exceed 0.551 pound per hour because the process weight rate is less than one hundred (100) pounds per hour.

If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

Compliance Determination Requirements

T.1.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with T.1.1, the filter associated with emission unit R103BVS shall be in operation at all times that material is being transferred into the facility.

Section T consists of the following Sections: T.1.

Condition T.1.2 concludes the Section T requirements of this permit

SECTION U.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Wastewater Treatment Plant

Wastewater Treatment Plant (WWTP) Operations

(a) The Wastewater Treatment Plant (WWTP) operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D, the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
16-100	WWTP*	SITE WASTEWATER TREATMENT PLANT	None	None	N/A	N/A

Insignificant Activities [d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity [c]	Date of Construct
16-101	PAC SVF**	PAC SILO VENT FILTER	None	Filter	8 tons/hr	N/A

a Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).

* The wastewater treatment plant area consists of circular clarifiers, rectangular equalization basins, aeration basins, three six-million gallon open-top impoundment tanks, and other wastewater treatment system equipment.

** The emission unit identified as PAC SVF is a powdered activated carbon storage silo with a bin vent filter. The carbon is pneumatically transferred from the truck to the silo and the filter, which is integral to the process, because the filter is needed to separate the carbon from the transfer air.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

U.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the PAC silo vent filter (PAC SVF) shall not exceed the emission rate calculated using the following equation:

$$E = 4.10\ P^{0.67}$$

Where:

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for these emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
16-101	PAC SVF	8.0	16.5

Compliance Determination Requirements

U.1.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with U.1.1, the filter associated with emission unit PAC SVF shall be in operation at all times that material is being transferred into the facility.

Section U consists of the following Sections: U.1.

Condition U.1.2 concludes the Section U requirements of this permit

SECTION V.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Plant-MON

Plant-MON Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source subject to the applicable regulation.

(a) Plant-MON identifies the affected source subject to 40 CFR 63, Subpart FFFF. Plant-MON is the facility wide collection of MCPUs and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials specified in 40 CFR 63.2435(b)(1), that are not otherwise exempted from requirements of 40 CFR 63, Subpart FFFF. An MCPU includes equipment necessary to operate the miscellaneous organic chemical manufacturing process, as defined in 40 CFR 63.2550, and includes assigned storage tanks and product transfer racks, equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater, and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in 40 CFR 63.2435(b)(1)(i) through (v). MCPUs subject to 40 CFR 63, Subpart FFFF are identified below:

(1) CppMONRes3 identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces CPP Resin. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-311	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104B	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104A	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-600	Pure THF Tank
CppMONRes3	Group 2 Storage Tank	N/A	TK-106	Resin II Recycle Butanediol Storage Tank
CppMONRes3	Group 1 Transfer Rack	Vapor Balancing	Station #12	Methanol Railcar Loading Facility
CppMONRes3	Group 1 Transfer Rack	Vapor Balancing	Station #13	Methanol Railcar Loading Facility
CppMONRes3	Group 1 Transfer Rack	Vapor Balancing	THF Truck Loading Station	THF Truck Loading Station
CppMONRes3	Group 2 Transfer Rack	N/A	2" PMP-8009-B8C & -8010-B8C	2" PMP-8009-B8C & -8010-B8C
CppMONRes3	Group 2 Transfer Rack	N/A	1"-PBC-8091-BED	1"-PBC-8091-BED
CppMONRes3	Group 1 Continuous Process Vent	C-410 (Water Scrubber)	E-415	Methanol Vent Condenser
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-304B	BD Collection Vessel Vent

MCPU	Process Activity	Controlled By	ID	Description
CppMONRes3	Group 2 Continuous Process Vent	N/A	E-322	E-322 Vent Condenser on V-320 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-330	V-330 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-340	V-340 Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-360	V-360 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-364	V-364 Effluent Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-450	V-450 Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	V-460	V-460 BD Immersion Vessel
CppMONRes3	Group 2 Continuous Process Vent	N/A	E-314	E-314 Vent Condenser on C-310 Column
CppMONRes3	Heat Exchange System	N/A	CPP Cooling Tower System	N/A
CppMONRes3	Equipment Subject to Leak Detection and Repair Requirements	Various	Various	LDAR Equipment in CppMONRes3
CppMONRes3	Group 2 Wastewater Stream	N/A	4" WW-9031A	Water Scrubber C-501 Process Wastewater Stream
CppMONRes3	Group 2 Wastewater Stream	N/A	2"WM-8498-BBA3	Water Scrubber C-410 Process Wastewater Stream
CppMONRes3	Maintenance Wastewater	N/A	N/A	CppMONRes3 Subpart FFFF Maintenance Wastewater

(2) HppMONCoP1, HppMONCoP2, HppMONCoP3 and HppMONCoP4 identify MCPUs, as specified in 40 CFR 63.2435(b), that produce HPP Co-Polymer and conduct solvent recovery. HppMONCoP1, HppMONCoP2, HppMONCoP3 and HppMONCoP4 are located in HPP Co-Polymer. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
HppMONCoP1	Group 2 Continuous Process Vent	N/A	V-501	Filmtruder Spray Condenser Vent
HppMONCoP1	Group 2 Continuous Process Vent	N/A	E-1053	Condenser Vent
HppMONCoP2	Group 2 Storage Tank	N/A	V-304	Aniline Storage Tank
HppMONCoP2	Group 2 Storage Tank	N/A	V-4008A	PPD Storage Tank
HppMONCoP3	Group 2 Continuous Process Vent	N/A	V-324	Knock-out Pot Vent Emission Point 13-105
HppMONCoP1 HppMONCoP2 HppMONCoP3 HppMONCoP4	Heat Exchange System	N/A	Co-Polymer Cooling Tower System	N/A
HppMONCoP1 HppMONCoP2 HppMONCoP3 HppMONCoP4	Maintenance Wastewater	N/A	N/A	HppMONCoP1-4 Subpart FFFF Maintenance Wastewater

HppMONCoP2	Equipment Subject to Leak Detection and Repair Requirements	Various	Various	LDAR Equipment in HppMONCoP2

(3) HppMONMon1 identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the HPP monomer. HppMONMon1 is located in HPP ChemOps. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
HppMONMon1	Heat Exchange System	N/A	HPP Cooling Tower System	N/A
HppMONMon1	Group 2 Wastewater Stream	N/A	2"-SPN-S11-7612	V-100 Secondary Evaporator Bottoms
HppMONMon1	Maintenance Wastewater	N/A	N/A	HppMONMon1 Subpart FFFF Maintenance Wastewater

(4) HppMONPol1 identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the HPP polymer. HppMONPol1 is located in HPP ChemOps. The process activities listed below are included in the MCPU.

MCPU	Process Activity	Controlled By	ID	Description
HppMONPol1	Surge Control Vessel	Routed Back to Process	V-223	Toluene/Water Decanter
HppMONPol1	Surge Control Vessel	Routed Back to Process	V-250	UP03-112 BI Surge Tank
HppMONPol1	Surge Control Vessel	Routed Back to Process	V-970	Concentrated Waste Storage Tank
HppMONPol1	Bottoms Receiver	Routed Back to Process	V-273	Dry Toluene Surge Tank
HppMONPol1	Bottoms Receiver	Routed Back to Process	V-130	NPI Surge Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-336	TEA Addition Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-700	PA Storage Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-715	Aniline Storage Tank
HppMONPol1	Group 2 Storage Tank	N/A	V-750B	Contaminated Toluene Tank
HppMONPol1	Group 1 Continuous Process Vent	H-2100 (Catalytic Oxidizer)	H-2100 Inlet	H-2100 Inlet
HppMONPol1	Group 2 Continuous Process Vent	N/A	C-1011	ODCB Vent Tank Condenser - Process Side
HppMONPol1	Group 2 Continuous Process Vent	N/A	C-861	Stripper Vent Condenser - Process Side
HppMONPol1	Group 2 Continuous Process Vent	N/A	600 Area Vent	First NMP Reactor
HppMONPol1	Process Vent with Hydrogen Halide and Halogen HAP	N/A	H-2100 Inlet	H-2100 Inlet
HppMONPol1	Group 2 Transfer Rack	N/A	1 1/2"-F90-HC-SJ	Truck Loading Connection
HppMONPol1	Group 2 Transfer Rack	N/A	PH310-3"-C16-HC	Truck Loading Connection
HppMONPol1	Group 2 Transfer Rack	N/A	PH311-3"-F16-HC	Truck Loading Connection
HppMONPol1	Group 2 Transfer Rack	N/A	PH-322-2"-C16	Truck Loading Connection
HppMONPol1	Heat Exchange System	N/A	HPP Cooling Tower System	N/A

HppMONPol1	Equipment Subject to Leak Detection and Repair Requirements	N/A	Various	LDAR Equipment in HppMONPol1
MCPU	**Process Activity**	**Controlled By**	**ID**	**Description**
HppMONPol1	Group 2 Wastewater Stream	N/A	HC-1343	T-1340, TEA Stripping Column, Bottoms Interchanger
HppMONPol1	Group 2 Wastewater Stream	N/A	V-545	Drain to Manhole, ODCB Hot well
HppMONPol1	Group 2 Wastewater Stream	N/A	V-730	Dike to Sewer, Contaminated ODCB Storage Tank Dike
HppMONPol1	Group 2 Wastewater Stream	N/A	P-870A/B	Discharge to V-900, Pre-Concentrator Flash Drum
HppMONPol1	Group 2 Wastewater Stream	N/A	P-105A/B	Pumping T-105A/B Bottoms to V-105 A/B Carbon Beds, Carbon Bed Feed Pumps
HppMONPol1	Maintenance Wastewater	N/A	N/A	HppMONPol1 Subpart FFFF Maintenance Wastewater
(5) PhMON_PCP identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the PCP. PhMON_PCP is located in the Phenol Plant. The process activities listed below are included in the MCPU.				
MCPU	**Process Activity**	**Controlled By**	**ID**	**Description**
PhMON_PCP	Group 2 Transfer Rack	N/A	SP-402	PCP Railcar Loading Arms
PhMON_PCP	Group 2 Continuous Process Vent	N/A	E-492	PCP Vent Condenser Vent
PhMON_PCP	Heat Exchange System	N/A	Phenol Plant Cooling Tower System	N/A
PhMON_PCP	Maintenance Wastewater	N/A	N/A	PhMON_PCP Subpart FFFF Maintenance Wastewater
PhMON_PCP	Equipment Subject to Leak Detection and Repair Requirements	N/A	Various	LDAR Equipment in PhMON_PCP
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)				

Emission Limitations and Standards [326 IAC 2-7-5(1)]

V.1.1 General Provisions Relating to NESHAP [326 IAC 20][40 CFR Part 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected source Plant-MON, which includes miscellaneous organic chemical manufacturing processing units identified as CppMONRes3, HppMONCoP1, HppMONCoP2, HppMONCoP3, HppMONCoP4, HppMONMon1, HppMONPol1 and PhMON_PCP as designated by 40 CFR 63.2440(b), except when otherwise specified in 40 CFR 63, Subpart FFFF.

V.1.2 National Emissions Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing [40 CFR Part 63, Subpart FFFF][326 IAC 20]

(a) The affected source includes the facility wide collection of miscellaneous organic chemical manufacturing processing units (MCPUs) and heat exchange systems, wastewater and waste management units that are associated with manufacturing materials described in 40 CFR 63.2435(b)(1) and is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Organic Chemical Manufacturing (40 CFR 63, Subpart FFFF), effective November 10, 2003. [A complete copy of 40 CFR 63, Subpart FFFF is in Section QQ.] Pursuant to this rule the Permittee must comply with 40 CFR 63, Subpart FFFF on and after May 10, 2008, or such other compliance date authorized pursuant to 40 CFR 63.6; or accept and meet enforceable HAP emission limits below the major source threshold prior to November 10, 2006.

(b) The affected source, Plant-MON, subject to 40 CFR 63, Subpart FFFF includes each of the following miscellaneous organic chemical manufacturing units:

(1) CppMONRes3 (located in CPP Resin) identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces CPP Resin;
(2) HppMONCoP1, HppMONCoP2, HppMONCoP3, HppMONCoP4 (located in HPP Co-Polymer) identify MCPUs, as specified in 40 CFR 63.2435(b), that produce HPP Co-Polymer and conduct solvent recovery;

(3) HppMONMon1 (located in HPP ChemOps) identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the HPP monomer;

(4) HppMONPol1 (located in HPP ChemOps) identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces the HPP polymer; and

(5) PhMON_PCP (located in the phenol plant) identifies the MCPU, as specified in 40 CFR 63.2435(b), that produces PCP.

(c) The definitions set forth in 40 CFR 63.2550 are applicable to requirements established pursuant to 40 CFR 63, Subpart FFFF.

(d) The table that follows provides general provisions of 40 CFR Part 63, Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2430	What is the purpose of this subpart?
63.2435(a-d)	Am I subject to the requirements in this subpart?
63.2440(a-b)	What parts of my plant does this subpart cover?
63.2445(b-e)	When do I have to comply with this subpart?
63.2450(a)	What are the general requirements for complying with this subpart?
63.2450(p)	What are the general requirements for complying with this subpart?
63.2535	What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2540	What parts of the general provisions apply to me?
63.2545	Who implements and enforces this subpart?
63.2550	What definitions apply to this subpart?

V.1.3 General Provisions Relating to Miscellaneous Organic Chemical Manufacturing [326 IAC 20][40 CFR 63, Subpart A]

The table that follows sets forth provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, that apply to the affected source Plant-MON, except as provided in 40 CFR 63.2540 and Table 12 of 40 CFR 63, Subpart FFFF.

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.1	Applicability
63.3	Units and abbreviations
63.4	Prohibited activities and circumvention
63.6(a)	Compliance with standards and maintenance requirements: Applicability
63.6(c)(1-2)	Compliance dates for existing sources
63.6(e)(1 and 3)	Operation and maintenance requirements
63.6(f)(1-3)	Compliance with nonopacity standards
63.12	State authority and delegations
63.14	Incorporations by reference
63.15	Performance Track Provisions

V.1.4 Continuous Process Vents [326 IAC 20][40 CFR 63, Subpart FFFF]

(a) Pursuant to 40 CFR 63.2455(a), the Permittee shall meet each emission limit in Table 1 to 40 CFR 63, Subpart FFFF that applies to the continuous process vents of the affected source, Plant-MON.

(b) The following table sets forth provisions of 40 CFR 63, Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2450(c)	What are the general requirements for complying with this subpart?
63.2450(s)	What are the general requirements for complying with this subpart?
63.2455(a, b and c)	What requirements must I meet for continuous process vents?

V.1.5 Hydrogen Halide and Halogen HAP from Process Vents [326 IAC 20][40 CFR 63, Subpart FFFF]

(a) Pursuant to 40 CFR 63.2465(a), the Permittee shall meet each emission limit in Table 3 to 40 CFR 63, Subpart FFFF that applies to the hydrogen halide and halogen HAP process vents of the affected source, Plant-MON.

(b) The following table sets forth the provisions of 40 CFR 63, Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2450(b)	What are the general requirements for complying with this subpart?
63.2465(a)	What requirements must I meet for process vents that emit hydrogen halide and halogen HAP or HAP metals?
63.2465(b)	What requirements must I meet for process vents that emit hydrogen halide and halogen HAP or HAP metals?
63.2465(c)	What requirements must I meet for process vents that emit hydrogen halide and halogen HAP or HAP metals?

V.1.6 Storage Tanks, Surge Control Vessels, and Bottoms Receivers [326 IAC 20] [40 CFR 63, Subpart FFFF]

(a) Pursuant to 40 CFR 63.2470(a) and 40 CFR 63.2450(r), the Permittee shall meet each emission limit in Table 4 to 40 CFR 63, Subpart FFFF that applies to the storage tanks, surge control vessels, and bottoms receivers of the affected source, Plant-MON.

(b) The following table sets forth the provisions of 40 CFR 63, Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2450(r)	What requirements must I meet for surge control vessels and bottom receivers
63.2470(a)	What requirements must I meet for storage tanks?
63.2470(c)	What requirements must I meet for storage tanks?
63.2470(d)	What requirements must I meet for storage tanks?
63.2470(e)	What requirements must I meet for storage tanks?

V.1.7 Transfer Racks [326 IAC 20][40 CFR 63, Subpart FFFF]

(a) Pursuant to 40 CFR 63.2475(a), the Permittee shall meet each emission limit in Table 5 to 40 CFR 63, Subpart FFFF that applies to the transfer racks of the affected source, Plant-MON.

(b) The following table sets forth provisions of 40 CFR 63, Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2475(a)	What requirements must I meet for transfer racks?
63.2475(b)	What requirements must I meet for transfer racks?

V.1.8 Equipment Leaks [326 IAC 20][40 CFR 63, Subpart FFFF]

Pursuant to 40 CFR 63.2480(a), the Permittee shall control leaks of HAPs from each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems used to comply with Table 6 to 40 CFR 63, Subpart FFFF. The Permittee has elected to comply with the requirements of 40 CFR 63.2480(a) by complying with the applicable requirements of 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d). Equipment that is intended to operate in organic hazardous air pollutant service for less than 300 hours during the calendar year, or is excluded pursuant to 40 CFR 63.160(e) or (f), is exempt from the provisions of 40 CFR 63, Subpart H.

Applicable 40 CFR Part 63, Subpart H Requirements	Regulatory Citation Description
63.162	Standards: General
63.163	Standards: Pumps in Light Liquid Service
63.164	Standards: Compressors
63.165	Standards: Pressure Relief Devices in Gas/Vapor Service
63.166	Standards: Sampling Connection Systems
63.167	Standards: Open-Ended Valves or Lines
63.168	Standards: Valves in Gas/Vapor Service and in Light Liquid Service
63.169	Standards: Pumps, Valves, Connectors and Agitators in Heavy Liquid Service; Instrumentation Systems; and Pressure Relief Devices in Liquid Service.
63.171	Standards: Delay of Repair
63.172	Standards: Closed-Vent Systems and Control Devices
63.173	Standards: Agitators in Gas/Vapor Service and in Light Liquid Service
63.175	Quality Improvement Program for Valves
63.176	Quality Improvement Program for Pumps
63.179	Alternative Means of Emission Limitation: Enclosed-Vented Process Units
63.180	Test Methods and Procedures

V.1.9 Wastewater and Liquid Streams in Open Systems [326 IAC 20][40 CFR 63, Subpart FFFF]

(a) Pursuant to 40 CFR 63.2485(a), the Permittee shall meet each requirement in Table 7 to 40 CFR 63, Subpart FFFF that applies to the wastewater streams and liquid streams in open systems within the MCPUs that are part of the affected source, Plant-MON.

(b) The following table sets forth the provisions of 40 CFR 63, Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2485(a)	What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?
63.2485(b)	What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?
63.2485(c)	What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?
63.2485(j)	What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?
63.2485(l)	What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?
63.2485(m)	What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?

(c) The following table sets forth the provisions of 40 CFR 63, Subpart F and Subpart G that apply to the affected source, Plant-MON, except as specified in 40 CFR 63.2485.

Applicable 40 CFR Part 63, Subpart F and Subpart G Requirements	Regulatory Citation Description
63.105	Maintenance wastewater requirements
63.132-147	Process wastewater provisions

V.1.10 Heat Exchange Systems [326 IAC 20][40 CFR 63, Subpart FFFF]

(a) Pursuant to 40 CFR 63.2490(a), the Permittee shall comply with each requirement in Table 10 to 40 CFR 63, Subpart FFFF, except as specified in 40 CFR 63.2490(b) and (c) that applies to the heat exchange systems that are part of the affected source, Plant-MON.

(b) The following table sets forth provisions of 40 CFR 63, Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2490(a)	What requirements must I meet for heat exchange systems?
63.2490(b)	What requirements must I meet for heat exchange systems?
63.2490(c)	What requirements must I meet for heat exchange systems?

V.1.11 Control Device Requirements Relating to Miscellaneous Organic Chemical Manufacturing [326 IAC 20][40 CFR 63, Subpart FFFF]

The table that follows provides control device requirements of 40 CFR 63, Subpart SS and Subpart FFFF that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart SS and Subpart FFFF Requirements	Regulatory Citation Description
63.982(c)	Closed vent system and nonflare control devices
63.982(d)	Route to a flue gas system or process
63.984	Fuel gas systems and processes to which storage vessel, transfer rack, or equipment leak regulated material and emissions are routed
63.988	Incinerators, boilers, and process heaters
63.990	Absorbers, condensers, and carbon absorbers used as control devices
63.994	Halogen scrubber and other halogen reduction devices
63.2450(e)(1)	What are the general requirements for complying with this subpart?
63.2450(e)(3)	What are the general requirements for complying with this subpart?

V.1.12 Testing and Monitoring Requirements Relating to Miscellaneous Organic Chemical Manufacturing [326 IAC 20][40 CFR 63, Subpart FFFF]

(a) The table that follows provides performance testing and monitoring requirements of 40 CFR 63, Subpart A, that apply to the affected source, Plant-MON, except as provided in 40 CFR 63.2540 and Table 12 to 40 CFR 63, Subpart FFFF.

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.7(a-d)	Performance testing requirements
63.7(e)(1-3)	Conduct of performance tests
63.7(f-h)	Performance testing requirements
63.8	Monitoring requirements

(b) The table that follows provides performance testing and monitoring requirements of 40 CFR 63, Subpart G, that apply to process wastewater streams in the affected source, Plant-MON, except as provided in 40 CFR 63.2485 of 40 CFR 63, Subpart FFFF.

Applicable 40 CFR Part 63, Subpart G Requirements	Regulatory Citation Description
63.144(b)	Procedures to establish concentrations when determining Group status under paragraph (a)(1) of 63.144.
63.144(c)	Procedures to determine flow rate, when evaluating Group status under paragraph (a)(1) of 63.144.

(c) The table that follows provides performance testing and monitoring requirements of 40 CFR 63, Subpart SS, that apply to the affected source, Plant-MON, except as provided in 40 CFR 63, Subpart FFFF.

Applicable 40 CFR Part 63, Subpart SS Requirements	Regulatory Citation Description
63.982(d)	Route to a flue gas system or process
63.988	Incinerators, boilers and process heaters
63.990	Absorbers, condensers and carbon absorbers used as control devices
63.994	Halogen scrubber and other halogen reduction devices
63.996	General monitoring requirements for control and recovery devices
63.997	Performance test compliance assessment requirements for control devices

(d) Pursuant to 40 CFR 63, Subpart FFFF, the Permittee shall comply with the applicable testing and monitoring requirements for the affected source, Plant-MON, identified in the following table.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2450(g)(1, 2, 4 and 5)	What are the general requirements for complying with this subpart? Requirements for performance tests
63.2450(k)(1, 2, 4, 5 and 6)	What are the general requirements for complying with this subpart? Continuous Parameter Monitoring
63.2450(l)	What are the general requirements for complying with this subpart? Startup, shutdown and malfunction

V.1.13 National Emissions Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing - Notification Requirements [40 CFR 63, Subpart FFFF] [326 IAC 20]

(a) Pursuant to 40 CFR 63.2515, the Permittee shall submit the notifications in 40 CFR 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to the affected source Plant-MON and chosen compliance method by the dates specified. These notifications include, but are not limited to, the following:

(1) An initial notification containing the information specified in 40 CFR 63.9(b)(2); and

(2) If required to conduct a performance test, a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required by 40 CFR 63.7(b)(1) and 40 CFR 63.2515(c). For any performance test required as part of the initial compliance procedures for batch process vents in Table 2 to 40 CFR 63, Subpart FFFF, the Permittee shall submit the test plan required by 40 CFR 63.7(c) and the emission profile with the notification of the performance test.

(b) Pursuant to 40 CFR 63.2520(a), the Permittee shall submit a precompliance report to request approval for any of the items in 40 CFR 63.2520(c)(1) through (7) at least six (6) months prior to the date specified in 40 CFR 63.2445(b).

(c) Pursuant to 40 CFR 63.2520(d), the Permittee shall submit a notification of compliance status report according to the schedule in paragraph (1), and the notification of compliance status report must contain the information specified in paragraph (2).

(1) The Permittee shall submit the notification of compliance status report no later than 150 days after the date specified in 40 CFR 63.2445(b).

(2) The notification of compliance status report shall include the information in 40 CFR 63.2520(d)(2)(i) through (ix).

(d) The notifications required by paragraphs (b) and (c) shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notifications required by paragraphs (b) and (c) require the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

V.1.14 Record Keeping and Reporting Requirements [40 CFR 63, Subpart FFFF][326 IAC 20]

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR 63, Subpart A - General Provisions, that apply to the affected source, Plant-MON, except as provided in 40 CFR 63.2540 and Table 12 of 40 CFR 63, Subpart FFFF.

Applicable 40 CFR Part 63, Subpart A Requirements	Regulatory Citation Description
63.5	Preconstruction review and notification requirements
63.9	Notification requirements
63.10	Recordkeeping and reporting requirements
63.13	Addresses of State air pollution control agencies and EPA Regional Offices

(b) The table that follows provides the specific applicable record keeping and reporting requirements of the National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (MON) [40 CFR 63, Subpart FFFF] that apply to the affected source, Plant-MON.

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2435(d)	Transfer rack predominant use determination
63.2445(c)	Notification requirements
63.2450(k)(1) and (5)	Record keeping
63.2450(l and m)	Reporting
63.2515	What notifications must I submit and when?

Applicable 40 CFR Part 63, Subpart FFFF Requirements	Regulatory Citation Description
63.2520 (a, b, d and e)	What reports must I submit and when?
63.2525(a, b, e, f, g, and j)	What records must I keep?

(c) The table that follows provides the specific applicable record keeping and reporting requirements of the National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations and Wastewater [40 CFR 63, Subpart G] that apply to the affected source, Plant-MON, except as specified in 63.2485.

Applicable 40 CFR Part 63, Subpart G Requirements	Regulatory Citation Description
63.132-147	Process Wastewater Provisions

(d) The table that follows provides the specific applicable record keeping and reporting requirements of the National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks [40 CFR 63, Subpart H] that apply to the affected source, Plant-MON, except as specified in 63.2480(b) and (d).

Applicable 40 CFR Part 63, Subpart H Requirements	Regulatory Citation Description
63.181	Recordkeeping Requirements
63.182	Reporting Requirements

(e) The table that follows provides the specific applicable record keeping and reporting requirements of the National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or Process [40 CFR 63, Subpart SS] that apply to the affected source, Plant-MON, except as provided in 40 CFR 63, Subpart FFFF.

Applicable 40 CFR Part 63, Subpart SS Requirements	Regulatory Citation Description
63.998	Record keeping requirements
63.999	Notifications and other reports

(f) All records required to be maintained by Condition V.1.14 shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.

(g) The Permittee shall submit the reports and records required to be submitted by Condition V.1.14 to the address listed in Section C - General Reporting Requirements of this permit.

SECTION V.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Group 1 MON Process Activities' Emission Limits and Work Practices

(f) Group 1 MON process activities that require emission limits or work practices in the affected source, Plant-MON, are identified below. Each process activity is identified with an MCPU, process activity, controlled by, ID, and a description.

MCPU	Process Activity	Controlled By	ID	Description
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-311	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104B	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	TK-104A	Resin II Methanol Storage Tank
CppMONRes3	Group 1 Storage Tank	C-510 (Water Scrubber)	V-600	Pure THF Tank
CppMONRes3	Group 1 Continuous Process Vent	C-410 (Water Scrubber)	E-415	Methanol Vent Condenser
CppMONRes3	Group 1 Transfer Rack	Vapor Balance	Station #12	Methanol Railcar Loading Facility
CppMONRes3	Group 1 Transfer Rack	Vapor Balance	Station #13	Methanol Railcar Loading Facility
CppMONRes3	Group 1 Transfer Rack	Vapor Balance	THF Truck Loading Station	THF Truck Loading Station
HppMONPol1	Group 1 Continuous Process Vent	H-2100 (Catalytic Oxidizer)	H-2100	H-2100 Inlet

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

V.2.1 Hazardous Air Pollutants (HAPs) [40 CFR 63, Subpart FFFF][326 IAC 20]

(a) Pursuant to 40 CFR 63.2455(a) and Table 1 to 40 CFR 63, Subpart FFFF, the Group 1 continuous process vents E-415 (part of the MCPU CppMONRes3 and controlled by C-410) and H-2100 Inlet (part of the MCPU HppMONPol1 and controlled by H-2100) shall comply with the Emission Limits and Work Practice Standards for Continuous Process Vents via one of the following options.

(1) Reduce emissions of total organic HAP by ≥ 98% by weight or to an outlet process concentration ≤ 20 ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or

(2) Reduce emissions of total organic HAP by venting emissions through a closed vent system to a flare; or

(3) Use a recovery device to maintain the TRE above 1.9 for an existing source or above 5.0 for a new source.

(b) Pursuant to 40 CFR 63.2470(a) and Table 4 to 40 CFR 63, Subpart FFFF, the Group 1 storage tanks TK-104A, TK-104B, V-311 and V-600 (part of the MCPU CppMONRes3 and controlled by C-510), shall comply with the Emission Limits for Storage Tanks via one of the following options;

(1) Reduce total HAP emissions by ≥ 95% by weight or to ≤ 20 ppmv of TOC or organic HAP and ≤ 20 ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or

(2) Reduce total organic HAP emissions by venting emissions through a closed vent system to a flare; or

(3) Reduce total HAP emissions by venting emissions to a fuel gas system or process in accordance with 63.982(d) and the requirements referenced therein.

(c) Pursuant to 40 CFR 63.2475(a) and Table 5 to 40 CFR 63, Subpart FFFF, the Group 1 transfer racks (Station #12, Station #13 and the THF Truck Loading Station, which are part of the MCPU CppMONRes3), shall comply with the Emission Limits for Transfer Racks via one of the following options.

(1) Reduce emissions of total organic HAP by ≥ 98% by weight or to an outlet concentration ≤ 20 ppmv organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or

(2) Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a flare; or

(3) Reduce emissions of total organic HAP venting emissions to a fuel gas system or process in accordance with §63.982(d) and the requirements referenced therein; or

(4) Use a vapor balancing system designed and operated to collect organic HAP vapors displaced from tank truck and railcars during loading and route the collected HAP vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected by a common header.

(d) The closed vent system collecting vapors from storage tanks TK-104A, TK-104B, V-311 and V-600 (part of MCPU CppMONRes3) and routing the vapors to control device C-510, shall comply with the closed vent system equipment and operating requirements of 40 CFR 63.983(a).

(e) The closed vent system collecting vapors from storage tanks TK-104A, TK-104B, V-311 and V-600 (part of MCPU CppMONRes3) and routing the vapors to control device C-510, shall comply with the closed vent system leak repair provisions of 40 CFR 63.983(d).

Compliance Determination Requirements

V.2.2 Performance Testing and Procedures Required by 40 CFR 63, Subpart SS and Subpart FFFF [326 IAC 20][40 CFR 63, Subpart SS and Subpart FFFF]

(a) In order to demonstrate compliance with Condition V.2.1, the Permittee shall conduct a performance test to verify the emissions reductions in Condition V.2.1 by testing:

(1) The outlet of the H-2100 oxidizer to verify the total organic HAP outlet emissions are reduced by ≥ 98% by weight or to an outlet process concentration ≤ 20 ppmv as organic HAP or TOC;

(2) The C-410 scrubber to verify the scrubber inlet emissions are reduced ≥ 98% by weight or to an outlet concentration ≤ 20 ppmv, as organic HAP or TOC. As an alternative to conducting the performance test described in this condition, V.2.2(a)(2), a design evaluation may be performed pursuant to 63.985(b)(1)(i); and

(3) The C-510 scrubber to verify the scrubber inlet emissions are reduced ≥ 95% by weight or to an outlet concentration ≤ 20 ppmv, as organic HAP or TOC. As an alternative to conducting the performance test described in this condition, V.2.2(a)(3), a design evaluation may be performed pursuant to 63.985(b)(1)(i).

(b) All testing shall be conducted in accordance Section C - Performance Testing

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

V.2.3 Monitoring and Inspection Required by 40 CFR 63, Subpart SS and Subpart FFFF [326 IAC 20][40 CFR 63, Subpart SS and Subpart FFFF]

(a) Pursuant to 40 CFR 63.2450(k)(5) and in order to determine compliance with Condition V.2.1(a) for C-410, the Permittee shall use a flow meter capable of providing a continuous record of the absorber inlet liquid flow and determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop, or via other procedures in accordance with 40 CFR 63.2450(k)(5)(ii).

(b) Pursuant to 40 CFR 63.988(c) and in order to determine compliance with Condition V.2.1(a) for H-2100 Inlet, the Permittee shall continuously monitor temperatures with temperature monitoring devices installed in the gas stream immediately before and after the H-2100 catalyst bed.

(c) Pursuant to 40 CFR 63.2450(k)(5) and in order to determine compliance with Condition V.2.1(b) for C-510, the Permittee shall use a flow meter capable of providing a continuous record of the absorber inlet liquid flow and determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop, or via other procedures in accordance with 40 CFR 63.2450(k)(5)(ii).

(d) The Permittee shall comply with the closed vent system inspection and monitoring requirements identified in the following table:

Applicable 40 CFR Part 63, Subpart SS Requirements	**Regulatory Citation Description**
63.983(a)(3)	Bypass monitoring
63.983(b)	Closed vent system inspection and monitoring requirements
63.983(c)	Closed vent system inspection procedures

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)]

V.2.4 Record Keeping Required by 40 CFR 63, Subpart SS and Subpart FFFF [326 IAC 20] [40 CFR 63, Subpart SS and Subpart FFFF]

(a) Pursuant to 40 CFR 63.2450(k)(1), 40 CFR 63.2525(g) and 40 CFR 63.998(c)(1)(ii)(A) for scrubbers C-410 and C-510 and oxidizer H-2100, the Permittee shall record the date and time of completion of each calibration check and all maintenance performed on scrubber C-410 and C-510 water influent flow meters and oxidizer H-2100 temperature monitoring devices.

(b) Pursuant to 40 CFR 63.2450(k)(5) for scrubbers C-410 and C-510, the Permittee shall continuously record the scrubber influent liquid flow using flow meters and record the scrubber liquid-to-gas ratio averaged over the time period of any performance test.

(c) Pursuant to 40 CFR 63.2450(k), the Permittee shall keep records as specified in 40 CFR 63.998(c)(1)(i) and (ii) for the scrubber C-410 and C-510 water influent flow meters and oxidizer H-2100 temperature monitoring devices (i.e., the CPMS for C-410, C-510 and H-2100).

(d) Pursuant to 40 CFR 63.2525(a), the Permittee shall maintain records pertaining to the monitoring conducted using scrubber C-410 and C-510 water influent flow meters and oxidizer H-2100 temperature monitoring devices in accordance with the requirements in the table below:

Applicable 40 CFR Part 63, Subpart SS Requirements	Regulatory Citation Description
63.998(b)(1)	Continuous records and monitoring system data handling - continuous records
63.998(b)(2)	Continuous records and monitoring system data handling - Excluded data
63.998(b)(3)	Continuous records and monitoring system data handling - Records of daily averages
63.998(b)(6)	Continuous records and monitoring system data handling - system data handling

(e) Pursuant to 40 CFR 63.2525(a), the Permittee shall maintain oxidizer H-2100 monitoring records in accordance with the requirements in the table below:

Applicable 40 CFR Part 63, Subpart SS Requirements	Regulatory Citation Description
63.998(c)(2)	Combustion control and halogen reduction device monitoring records
63.998(d)(5)	Records of monitored parameters outside of range

(f) Pursuant to 40 CFR 63.2525(a) and 40 CFR 63.2470(c), the Permittee shall maintain scrubber C-410 and scrubber C-510 monitoring records in accordance with the requirements in the table below:

Applicable 40 CFR Part 63, Subpart SS Requirements	Regulatory Citation Description
63.998(c)(3)	Monitoring records for recovery devices, absorbers, condensers, carbon absorbers or other noncombustion systems used as control devices
63.998(d)(2)(ii)	Storage vessel and transfer rack records
63.998(d)(5)	Records of monitored parameters outside of range

(g) Pursuant to 40 CFR 63.998(a)(2)(ii)(B)(2) for oxidizer H-2100, the Permittee shall record the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of any performance test.

(h) All records required to be maintained by Condition V.2.4 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

V.2.5 Reporting Required by 40 CFR 63, Subpart SS and Subpart FFFF [326 IAC 20]
[40 CFR 63, Subpart SS and Subpart FFFF]

(a) For oxidizer H-2100 and scrubbers C-410 and C-510, the results of performance tests or design evaluations used to demonstrate initial compliance shall be included as part of the Notification of Compliance Status Report submitted pursuant to 40 CFR 63.2520(d) and as required by 40 CFR 63.999(a).

(b) For the oxidizer H-2100, the operating range for each monitoring parameter identified for the oxidizer shall be included as part of the Notification of Compliance Status Report submitted pursuant to 40 CFR 63.2520(d) and as required by 40 CFR 63.999(b).

(c) For surge control vessels (V-223, V-250 and V-970) and bottoms receivers (V-273 and V-130), the information required in 40 CFR 63.999(b)(1)(i) through (iii) shall be included as part of the Notification of Compliance Status Report submitted pursuant to 40 CFR 63.2520(d).

(d) Pursuant to 40 CFR 63.2520(e)(9), the Permittee shall include in the compliance report submitted pursuant to 63.2520(a) applicable records and information for scrubber C-410, scrubber C-510 and oxidizer H-2100 monitoring and the closed vent system collecting vapors from storage tanks TK-104A, TK-104B, V-311 and V-600, in accordance with the requirements in the table below:

Applicable 40 CFR Part 63, Subpart SS Requirements	Regulatory Citation Description
63.998(d)(5)	Records of monitored parameters outside of range
63.999(c)(1, 2, 4, 5 and 6)	Periodic reports

(e) The Permittee shall submit the reports and records required to be submitted by Condition V.2.5 to the address listed in Section C - General Reporting Requirements, of this permit.

Section V consists of the following Sections: V.1 and V.2.

Condition V.2.5 concludes the Section V requirements of this permit

SECTION W.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: COGEN AUX BOILER

(a) The natural gas-fired AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) as identified below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in this section.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to an affected source, as defined pursuant to the NESHAP. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is a new affected source subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section D.1 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
19-002	AUX BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-004	AUX2 BOILER*	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-005	CG1 BOILER*	Natural gas-fired boiler with low-NOx burner	None	None	249 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
* AUX2 BOILER and CG1 BOILER are part of the AOS in W.1.19.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Construction Conditions

General Construction Conditions

W.1.1 Permit No Defense [326 IAC 2-2-8]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-**22**

through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

W.1.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

W.1.3 Modifications to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operating Conditions

Emission Limitations and Standards [326 IAC 2-7-5(1)]

W.1.4 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (Prevention of Significant Deterioration) for the pollutant Greenhouse Gases (GHGs), the best available control technology (BACT) for the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) shall be as follows:

(a) AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall fire natural gas only;

(b) Boiler insulation including energy efficient refractory will be installed for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(c) The AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall achieve a minimum 80% thermal efficiency (HHV);

(d) Improved Combustion Measures: Combustion Tuning for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(e) Optimization and digital control system instrumentation for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(f) Minimize of air infiltration for AUX BOILER (and AUX2 BOILER and CG1 BOILER if W.1.19 is elected);

(g) Perform boiler tune-ups pursuant to 40 CFR 63 Subpart DDDDD for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(h) Operating and maintenance practices pursuant to 40 CFR 63 Subpart DDDDD for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(i) Steam line maintenance: insulation of new steam and new hot water lines for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(j) Total emissions from AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler with compliance determined on a monthly basis.

(j) Air preheater or economizer for CG1 BOILER only, if CG1 BOILER is operated as a primary use boiler, if W.1.19 is elected.

W.1.5 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

(a) The CO emissions from the COGEN Project shall be limited as follows:

(1) The total CO emissions from the COGEN Project (COGEN Project consists of BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO, COGEN, and AUX BOILER) shall be limited to less than 360 tons CO per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) When W.1.19 is elected and the COGEN Project consists of COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO, the CO net emissions increase shall be limited to less than 360 tons CO per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this Condition and Conditions D.3.3(a), L.2.1(d), and W.2.4(b) ensures that the net emission increase of CO from the COGEN Project is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable to the COGEN Project modification.

(b) The VOC emissions from the COGEN Project shall be limited as follows:

(1) The total VOC emissions from the COGEN Project (COGEN Project consists of: BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO, COGEN, AUX BOILER) shall be limited to less than 39.6 tons VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) When W.1.19 is elected and the COGEN Project consists of COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO, the net emissions increase from the COGEN Project, as defined pursuant to 326 IAC 2-2-1(ii), shall be limited less more than 39.6 tons VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this Condition and Conditions D.3.3(b), L.2.1(e), and W.2.4(c) ensures that the net emission increase of VOC from the COGEN Project is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Preventions of Significant Deterioration (PSD) not applicable to the COGEN Project modification.

W.1.6 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12]

The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1 that apply to each affected facility AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected).

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
60.11(a)	Compliance with standards and maintenance requirements	X	X	X

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
60.11(d)	Compliance with standards and maintenance requirements	X	X	X
60.13(a)	Monitoring requirements	X	X	X
60.13(b)	Monitoring requirements	X	X	X
60.13(c)	Monitoring requirements	X	X	X
60.13(d)	Monitoring requirements	X	X	X
60.13(e)	Monitoring requirements	X	X	X
60.13(f)	Monitoring requirements	X	X	X
60.13(g)	Monitoring requirements	X	X	X
60.13(h)	Monitoring requirements	X	X	X

* AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.

W.1.7 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 40 CFR 60.44b(a) and 326 IAC 12, nitrogen oxide (NOx) emissions from AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be limited to 0.2 pounds per million Btu of heat input. The table that follows provides the specific applicable standards and monitoring provisions that apply to this boiler and the condition number where a description of the provisions can be found in Section II.

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.1(a)	60.44b(a)	Standard for Nitrogen Oxides	X	X	X
II.1(h)	60.44b(h)	Standard for Nitrogen Oxides	X	X	X
II.1(i)	60.44b(i)	Standard for Nitrogen Oxides	X	X	X
II.2(b)	60.48b(b)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(c)	60.48b(c)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(d)	60.48b(d)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(e)	60.48b(e)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.2(f)	60.48b(f)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(g)	60.48b(g)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X

* AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.

W.1.8 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) shall not exceed 0.14pounds per million Btu heat input (lb/MMBtu).

W.1.9 National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR 63, Subpart DDDDD]

The requirements of 40 CFR 63, Subpart DDDDD applicable to AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) are specified in Section D.1 of this permit.

Compliance Determination Requirements

W.1.10 Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 40 CFR 60, Subpart Db, compliance determination requirements for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) are identified in the following table:

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.3(c)	60.46b(c)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X
II.3(e)(4)	60.46b(e)(4)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X

* AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.

W.1.11 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart Db] [326 IAC 2-2]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 40 CFR 60.48b (Emission Monitoring for Particulate Matter and Nitrogen Oxides) and in order to demonstrate compliance with Condition W.1.6, a continuous monitoring system that meets the performance specifications of 326 IAC 3-5-2 shall be installed, calibrated, maintained, and operated on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) for measuring NOx.

W.1.12 NOx Monitoring System Downtime [326 IAC 2-2] [326 IAC 12] [40 CFR 60, Subpart Db]

In instances of NOx continuous emission monitoring system (CEMS) downtime, the Permittee shall obtain NOx emissions data according to the requirements of 40 CFR 60.48b(f).

W.1.13 Opacity [326 IAC 5-1]

In order to demonstrate compliance with 326 IAC 5-1, AUX BOILER shall only burn natural gas.

W.1.14 Testing Requirements

(a) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected), in order to demonstrate compliance with Condition W.1.5(a), the Permittee shall conduct a performance test to verify the CO emission factors for emissions unit AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) using methods as approved by the Commissioner. The test on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(b) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected), and in order to demonstrate compliance with Condition W.1.5(b), the Permittee shall conduct a performance test to verify the VOC emission factors for emissions unit AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) using methods as approved by the Commissioner. The test on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(c) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) , and in order to demonstrate compliance with Condition W.1.4(c), the Permittee shall perform thermal efficiency testing on AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) utilizing methods as approved by the Commissioner. The test on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

W.1.15 Greenhouse Gases (GHGs) Calculations

To determine the compliance status with Condition W.1.4, the following equation shall be used to determine the CO2e emissions from the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected):

CO2e emissions (tons/month, per boiler) = [(Fuel Usage x Heat Content) x (CO2 EF (lb/MMBtu) x CO2 GWP + CH4 EF x CH4 GWP + N2O EF x N2O GWP)] x 1 ton/2000 lb

Where:

Fuel Usage (MMScf/month) = monthly actual fuel usage
Heat Content (MMBtu/MMScf) = standard value in AP-42 for natural gas or vendor data, if available

CO2 EF (lb/MMBtu) = emission factor from Greenhouse Gas Mandatory Reporting Rule (40 CFR 98, Subpart C) for natural gas
CH4 EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
N2O EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
CO2 GWP = global warming potential from 40 CFR 98, Subpart A
CH4 GWP = global warming potential from 40 CFR 98, Subpart A
N2O GWP = global warming potential from 40 CFR 98, Subpart A

W.1.16 Carbon Monoxide (CO) Calculations

To determine the compliance status with Condition W.1.5(a), the following equation shall be used to determine the CO emissions from the COGEN Project:

CO emissions (tons/month) =
{[(Fuel Usage$_{AUX\ BOILER}$) x (CO EF$_{AUX\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{AUX2\ BOILER}$) x (CO EF$_{AUX2\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{CG1\ BOILER}$) x (CO EF$_{CG1\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{COGEN}$) x (CO EF$_{COGEN}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{BW\text{-}1\ BOILER}$) x (CO EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +
[(Fuel Usage$_{BW\text{-}2\ BOILER}$) x (CO EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +
[(Fuel Usage$_{SHEETFUMES}$) x (CO EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$]}/(2000 lbs/ton)

Where:

Fuel Usage$_{AUX\ BOILER}$ = MMScf/month actual fuel usage for AUX BOILER
CO EF$_{AUX\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
CO EF$_{AUX2\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
CO EF$_{CG1\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
(Btu /Scf of natural gas) $_{SABIC}$ = Heat content, in Btu/Scf, of natural gas from AP-42 or vendor data
Fuel Usage$_{COGEN}$ = MMScf/month actual fuel usage for COGEN
CO EF$_{COGEN}$ = 0.0055 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
Fuel Usage$_{BW\text{-}1\ BOILER}$ = MMScf/month actual natural gas fuel usage for BW1-BOILER
Fuel Usage$_{BW\text{-}2\ BOILER}$ = MMScf/month actual natural gas fuel usage for BW2-BOILER
CO EF$_{AP\text{-}42}$ = 84 lbs CO/MMScf emission factor from AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1
(1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$ = 1,020 MMBtu/MMScf heat content of natural gas from AP-42 Chapter 1.4 Natural gas Combustion

W.1.17 Volatile Organic Compounds (VOC) Calculations

To determine the compliance status with Condition W.1.5(b), the following equation shall be used to determine the VOC emissions from the COGEN Project:

VOC emissions (tons/month) =
{[(Fuel Usage$_{AUX\ BOILER}$) x (VOC EF$_{AUX\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{AUX2\ BOILER}$) x (VOC EF$_{AUX2\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{CG1\ BOILER}$) x (VOC EF$_{CG1\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{COGEN}$) x (VOC EF$_{COGEN}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{BW\text{-}1\ BOILER}$) x (VOC EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +

[(Fuel Usage$_{BW\text{-}2\ BOILER}$) x (VOC EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +
[(Fuel Usage$_{SHEETFUMES}$, MMScf/month) x (VOC EF$_{AP\text{-}42}$, lb/MMScf) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$]}/(2000 lbs/ton)

Where:

Fuel Usage$_{AUX\ BOILER}$ = MMScf/month actual fuel usage for AUX BOILER
VOC EF$_{AUX\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
VOC EF$_{AUX2\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
VOC EF$_{CG1\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
(Btu /Scf of natural gas)$_{SABIC}$ = Heat content, in Btu/Scf, of natural gas from AP-42 or vendor data
Fuel Usage$_{COGEN}$ = MMScf/month actual fuel usage for COGEN
VOC EF$_{COGEN}$ = 0.0025 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
Fuel Usage$_{BW\text{-}1\ BOILER}$ = MMScf/month actual fuel usage for BW1-BOILER
Fuel Usage$_{BW\text{-}2\ BOILER}$ = MMScf/month actual fuel usage for BW2-BOILER
VOC EF$_{AP\text{-}42}$ = 5.5 lbs VOC/MMScf emission factor from AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2
(1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$ = 1,020 MMBtu/MMScf heat content of natural gas from AP-42 Chapter 1.4 Natural gas Combustion

Record Keeping and Reporting Requirements [326 IAC 2- 7- 5(3)]

W.1.18 Record Keeping and Reporting Requirements

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1, that apply to AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected).

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
60.7(a)	Notification and record keeping	X	X	X
60.7(b)	Notification and record keeping	X	X	X
60.7(c)	Notification and record keeping	X	X	X
60.7(d)	Notification and record keeping	X	X	X
60.7(f)	Notification and record keeping	X	X	X
60.7(g)	Notification and record keeping	X	X	X

* AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.

(b) Pursuant to 40 CFR 60, Subpart Db and to document compliance with Condition W.1.7, the Permittee shall keep records and submit reports as specified in the following federal citations.

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.4(d)	60.49b(d)	Reporting and Recordkeeping Requirements	X	X	X
II.4(g)	60.49b(g)	Reporting and Recordkeeping Requirements	X	X	X
II.4(h)	60.49b(h)	Reporting and Recordkeeping Requirements	X	X	X
II.4(i)	60.49b(i)	Reporting and Recordkeeping Requirements	X	X	X
II.4(v)	60.49b(v)	Reporting and Recordkeeping Requirements	X	X	X
II.4(w)	60.49b(w)	Reporting and Recordkeeping Requirements	X	X	X

* AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.

(c) To document the compliance status with Condition W.1.7, the Permittee shall maintain records of all NOx continuous emissions monitoring data, pursuant to 326 IAC 3-5-6.

(d) A quarterly summary of the information to document the compliance status with Condition W.1.11 shall be submitted using the reporting forms located at the end of Section W of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) Pursuant to 326 IAC 3-5-7(c)(4) and to comply with W.1.11, reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, shall include the following:

(1) Date of downtime.

(2) Time of commencement.

(3) Duration of each downtime.

(4) Reasons for each downtime.

(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by a “responsible official” as defined by 326 IAC 2-7-1(35).

(f) To document the compliance status with Condition W.1.4(a) - GHGs PSD BACT, the Permittee shall maintain the monthly records of the total CO2e emissions from the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected).

(g) To document the compliance status with Condition W.1.5(a) - PSD for CO emissions, the Permittee shall maintain the monthly records of the total CO emissions from the COGEN Project calculated in W.1.16.

(h) To document the compliance status with Condition W.1.5(b) - PSD for VOC emissions, the Permittee shall maintain the monthly records of the total VOC emissions from the COGEN Project calculated in W.1.17.

(i) A quarterly summary of the information to document the compliance status with the CO limit in Condition W.1.5(a) shall be submitted using the reporting forms located at the end of permit Section W, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(j) A quarterly summary of the information to document the compliance status with the VOC limit in Condition W.1.5(b) shall be submitted using the reporting forms located at the end of permit Section W, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(k) All records required to be maintained by Condition W.1.18 shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

(l) The Permittee shall submit the reports and records required to be submitted by Condition W.1.18 to the address listed in Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

W.1.19 Alternative Operating Scenarios [326 IAC 2-7-20(d)]

(a) As an alternative to the operational configuration for the COGEN Project, as set forth in Section W of this permit, the facility may, at a later date, elect to construct and install two additional natural gas-fired boilers, AUX2 BOILER and CG1 BOILER, each rated at a maximum of 249 MMBtu/hr with concurrent shutdown of BW-1 BOILER and BW-2 BOILER.

(b) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it is operating.

SECTION W.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: COGEN

(a) The natural gas-fired COGEN emission unit is located in the COGEN Area as identified below. COGEN consists of a natural gas-fired turbine and a heat recovery steam generator (HRSG) with duct burner. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to the affected facility. COGEN is an affected facility pursuant to 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. The requirements of 40 CFR 60, Subpart KKKK, that are applicable to COGEN (including the HRSG with Duct Burner), are specified in this section of the permit. Because the requirements of 40 CFR 60, Subpart KKKK, apply to COGEN (including the HRSG with Duct Burner), the requirements of 40 CFR 60, Subpart Db, are not applicable to the Duct Burner.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the affected source. COGEN is an affected source pursuant to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The requirements of 40 CFR 63, Subpart YYYY, that are applicable to COGEN are specified in this section of the permit. Pursuant to 40 CFR 63.6095(d), Stay of standards for gas-fired subcategories, the COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

(d) Pursuant to the definitions contained in 40 CFR 63.7575, waste heat boilers are excluded from the definition of “boiler”. Waste heat boilers are defined to include duct burners; therefore, the HRSG, a waste heat boiler with duct burner, is not considered an affected source pursuant to 40 CFR 63, Subpart DDDDD.

(e) Pursuant to 40 CFR 63.6092, the HRSG with duct burner is not considered an affected source pursuant to 40 CFR 63, Subpart YYYY.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).	Oxidation Catalyst	None	1,812 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Construction Conditions

General Construction Conditions

W.2.1 Permit No Defense [326 IAC 2-2-8]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated there under, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

W.2.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

W.2.3 Modifications to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operating Conditions

Emission Limitations and Standards [326 IAC 2-7-5(1)]

W.2.4 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to PSD 326 IAC 2-2-3 (Prevention of Significant Deterioration) for the pollutant GHGs, the best available control technology (BACT) for the COGEN shall be as follows:

(a) COGEN shall use natural gas only.

(b) COGEN shall achieve a minimum net plant efficiency of 85% (LHV); and

(c) The total CO2e emissions from COGEN shall be limited to 937,379 tons of CO2e per twelve (12) consecutive month period with compliance determined on a monthly basis.

W.2.5 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

(a) COGEN's CO emissions are limited pursuant to Condition W.1.5(a).

(b) COGEN's VOC emissions are limited pursuant to Condition W.1.5(b).

W.2.6 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the duct burner of COGEN shall not exceed 0.14 pounds per million Btu heat input (lb/MMBtu).

W.2.7 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1-1, apply to the COGEN affected facility, except when otherwise specified in 40 CFR 60, Subpart KKKK.

W.2.8 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4320 and 326 IAC 12, nitrogen oxide (NOx) emissions from COGEN shall be limited to the following:

15 ppm at 15 percent O2, or

54 ng/J of useful output (0.43 lb/MWh)

W.2.9 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4320 and 326 IAC 12, nitrogen oxide (NOx) emissions from the COGEN HRSG Duct Burner shall be limited to the following:

54 ppm at 15 percent O2, or

110 ng/J of useful output (0.86 lb/MWh)

W.2.10 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4330 and 326 IAC 12, the COGEN Sulfur Dioxide (SO_2) emissions shall either be limited to 110 ng SO2/J (0.90 lbs SO2/MWh) gross output, or any fuel burned in the stationary combustion turbine shall not contain total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2 /MMBtu) heat input.

W.2.11 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4300 and 326 IAC 12, the table that follows provides the specific applicable standards and monitoring provisions that apply to the COGEN affected facility. Applicable definitions are set forth in 40 CFR 63.4420.

Applicable 40 CFR 60 Subpart KKKK Requirement	Regulatory Citation Title
60.4305 (a and b)	Does this subpart apply to my stationary combustion turbine?
60.4315	What pollutants are regulated by this subpart?
60.4320	What emission limits must I meet for nitrogen oxides (NOx)?
60.4330	What emission limits must I meet for sulfur dioxide (SO2)
60.4333	What are my general requirements for complying with this subpart?
60.4340	How do I demonstrate continuous compliance for NOx if I do not use water or steam

Applicable 40 CFR 60 Subpart KKKK Requirement	Regulatory Citation Title
	injection?
60.4345	What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?
60.4350	How do I use data from the continuous emission monitoring equipment to identify excess emissions?
60.4355	How do I establish and document a proper parameter monitoring plan?
60.4360	How do I determine the total sulfur content of the turbine's combustion fuel?
60.4365	How can I be exempted from monitoring the total sulfur content of the fuel?
60.4370	How often must I determine the sulfur content of the fuel?
60.4375	What reports must I submit?
60.4380	How are excess emissions and monitor downtime defined for NOx?
60.4385	How are excess emissions and monitoring downtime defined for SO2?
60.4395	When must I submit my reports?
60.4400	How do I conduct the initial and subsequent performance tests, regarding NOx?
60.4405	How do I perform the initial performance test if I have chosen to install a NOx-diluent CEMS?
60.4410	How do I establish a valid parameter range if I have chosen to continuously monitor parameters?

Applicable 40 CFR 60 Subpart KKKK Requirement	Regulatory Citation Title
60.4415	How do I conduct the initial and subsequent performance tests for sulfur?

W.2.12 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart YYYY] [326 IAC 20-1]

Pursuant to 40 CFR 63.6165 and Table 7 of Subpart YYYY of Part 63, the Permittee shall comply with the applicable provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1.

W.2.13 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP) is required for the COGEN and Oxidation Catalyst. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

W.2.14 Opacity [326 IAC 5-1]

In order to demonstrate compliance with 326 IAC 5-1, COGEN (including duct burner) shall only burn natural gas.

W.2.15 Alternative Operating Scenarios [326 IAC 2-7-20(d)]

(a) As an alternative to the operational configuration for the COGEN, as currently limited in Section W.2 of this permit, the facility may, at a later date, elect to construct and install an SCR unit to further reduce NOx emissions from the COGEN.

(b) When the alternative operating scenario provided in W.2.15(a) is elected by the Permittee, the NOx emissions from the COGEN shall be controlled by selective catalytic reduction (SCR) at all times the COGEN is in operation.

(c) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it is operating under.

W.2.16 Oxidation Catalyst

The oxidation catalyst shall be in operation at all times when the COGEN emission unit is in operation.

W.2.17 Greenhouse Gases (GHGs) Calculations

To determine the compliance status with Condition W.2.4, the following equation shall be used to determine the CO2e emissions from the COGEN emission unit:

CO2e emissions (tons/month) = [(Fuel Usage x Heat Content) x (CO2 EF x CO2 GWP + CH4 EF x CH4 GWP + N2O EF x N2O GWP)] x 1 ton/2000 lb

Where:

Fuel Usage (MMScf/month) = monthly fuel usage data from company records
Heat Content (MMBtu/MMScf) = standard value in AP-42 for natural gas or vendor data, if available
CO2 EF (lb/MMBtu) = emission factor from Greenhouse Gas Mandatory Reporting Rule (40 CFR 98, Subpart C) for natural gas

CH4 EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
N2O EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
CO2 GWP = global warming potential from 40 CFR 98, Subpart A
CH4 GWP = global warming potential from 40 CFR 98, Subpart A
N2O GWP = global warming potential from 40 CFR 98, Subpart A

W.2.18 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 3-5]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for the measurement of NOx emissions.

(b) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 or any other applicable performance specifications, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) In the event that a continuous emission monitoring system fails to operate as required, a record shall be made of the times and reasons for the failure and efforts made to correct the problem.

(d) Whenever a NOx CEMS is down for more than twenty-four (24) hours, the Permittee shall monitor the catalyst bed inlet temperature used in conjunction with the COGEN with a continuous temperature monitoring system no less often than once per four (4) hours. When for any one reading, the catalyst bed inlet temperature is below the minimum temperature, the Permittee shall take a reasonable response. The minimum temperature for this catalyst bed inlet is 380 °F. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A temperature reading that is below the minimum temperature is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 40 CFR 60, 40 CFR 75 and 40 CFR 96.

W.2.19 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11][40 CFR 64]

(a) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, in order to demonstrate compliance with Condition W.2.5(a), the Permittee shall conduct a performance test to verify the CO emission factor (CO EF_{COGEN} in Condition W.1.14(a)) for emissions unit COGEN using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(b) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, and in order to demonstrate compliance with Condition W.2.5(b), the Permittee shall conduct a performance test to verify the VOC emission factor (VOC EF_{COGEN} in Condition W.1.14(b)) for emissions unit COGEN using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(c) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, and in order to demonstrate compliance with Condition W.2.4(c), the Permittee shall perform thermal efficiency testing on COGEN utilizing methods as approved by the Commissioner. The test on the COGEN shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

W.2.20 Oxidation Catalyst Parametric Monitoring [40 CFR 64]

(a) In order to document proper operation, a continuous monitoring system shall be installed, calibrated, maintained, and operated on the inlet to the oxidation catalyst for measuring operating temperature. For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a 4-hour rolling average, calculated each hour using the hourly average temperatures from the 4 preceding hours. An hourly average temperature shall be calculated using all the temperature data recorded during the hour. From the date of the startup of the oxidation catalyst until the approved stack test results are available, the Permittee shall operate the oxidation catalyst at 525°F or above the 4-hour rolling average temperature recommended by the manufacturer.

(b) On and after the date the approved stack test results are available, the Permittee shall operate the oxidation catalyst at 525°F or above the 4-hour rolling average temperature specified by the catalyst manufacturer or as established during the most recent compliant stack test.

(c) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 4-hour rolling average temperature that is less than 525°F or as established in the most recent compliance stack test is not considered a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2- 7- 5(3)]

W.2.21 Record Keeping Requirement

(a) To document the compliance status with Condition W.2.18 - Maintenance of Continuous Emission Monitoring Equipment, the Permittee shall record the output of the continuous monitoring systems and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

(b) In the event that the NOx continuous emission monitoring system (CEMS) fails to operate as required in Condition W.2.18 - Maintenance of Continuous Emission Monitoring Equipment, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(c) The Permittee shall maintain records of NOx emissions from COGEN as required by 40 CFR 60, Subpart KKKK requirements set forth in W.2.7 and W.2.11.

(d) To document the compliance status with Conditions W.2.4, W.2.6 and W.2.10, the Permittee shall maintain monthly records of the amount and type of fuel combusted in the COGEN.

(e) To document the compliance status with Condition W.2.4 - GHGs PSD BACT, the Permittee shall maintain monthly records of the CO2e emissions.

(f) To document the compliance status with Condition W.2.20 - Oxidation Catalyst Parametric Monitoring, the Permittee shall maintain continuous temperature records (on a 4-hour rolling average basis) for the oxidation catalyst.

(g) To document the compliance status with Condition W.2.10, the Permittee shall maintain monthly records of the fuel sulfur content of the natural gas combusted in the COGEN, including the associated duct burner. The Permittee may comply with this requirement by maintaining a record of the current, valid purchase contract, tariff sheet or transportation contract for the natural gas combusted in the COGEN, including the associated duct burner, specifying that the maximum total sulfur content for the natural gas is 20 grains of sulfur or less per 100 standard cubic feet.

(h) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

W.2.22 Reporting Requirements

(a) The Permittee shall submit a quarterly summary of the information to document the compliance status with 40 CFR 60, Subpart KKKK for:

(1) COGEN NOx limit;
(2) COGEN HRSG Duct Burner NOx limit; and
(3) COGEN SO2 limit.

The report submitted by the Permittee does require the certification by a “responsible official” as defined by 326 IAC 2-7-1(35).

(b) A quarterly summary of the information to document compliance status with Condition W.2.4(c) shall be submitted using the reporting forms located at the end of Section W of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35).Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

W.2.23 Reporting Requirements [326 IAC 14-2-1] [326 IAC 20-1]

Pursuant to 40 CFR 63.6095, “stay of standards for gas fired subcategories”, COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

Section W consists of the following Sections: W.1 and W.2, and three (3) Part 70 Quarterly Reporting Forms.

Condition W.2.23 concludes the Section W requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name:	SABIC Innovative Plastics Mt. Vernon, LLC
Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.:	T129-30384-00002; Condition W.1.5(a)
Facility:	COGEN Project (COGEN, AUX BOILER, BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO) COGEN Project, if W.1.19 is elected (COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO)
Parameter:	CO
Limit:	The total CO emissions from the COGEN Project, as described above, shall be limited to 360 tons CO per twelve (12) consecutive month period, with compliance determined on a monthly basis

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name:	SABIC Innovative Plastics Mt. Vernon, LLC
Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.:	T129-30384-00002; Condition W.1.5(b)
Facility:	COGEN Project (COGEN, AUX BOILER, BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO) COGEN Project, if W.1.19 is elected (COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO)
Parameter:	VOC
Limit	The total VOC emissions from the COGEN Project, as described above, shall be limited to 39.6 tons VOC per twelve (12) consecutive month period, with compliance determined on a monthly basis

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12- Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.2.21(b)
Facility: COGEN
Parameter: CO2e/GHG
Limit: Total emissions of GHGs from COGEN shall not exceed 937,379 tons of CO2e per 12 consecutive month period, with compliance determined on a monthly basis.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.1.4
Facility: AUX BOILER
Parameter: CO2e/GHG
Limit: Total emissions of GHGs from AUX BOILER shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler, with compliance determined on a monthly basis.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.1.4
Facility: AUX2 BOILER, if W.1.19 is elected
Parameter: CO2e/GHG
Limit: Total emissions of GHGs from AUX2 BOILER shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler, with compliance determined on a monthly basis.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.1.4
Facility: CG1 BOILER, if W.1.19 is elected
Parameter: CO2e/GHG
Limit: Total emissions of GHGs from CG1 BOILER shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler, with compliance determined on a monthly basis.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature:_____
Date: _____
Phone: _____

ATTACHMENT A

ATTACHMENT A –

In addition to the nonapplicability determinations set forth in Sections D - U of this permit, the IDEM, OAQ has made the following determination regarding this source:

Rule	Does not apply to	Permit Section	Reason for Non-applicability
40 CFR 60, Subpart III	HPP CoPolymer and ChemOps	P and Q	The HPP CoPolymer and ChemOps areas do not manufacture any of the chemicals listed in 40 CFR 60.617.
40 CFR 60, Subpart NNN	HPP CoPolymer and ChemOps	P and Q	The HPP CoPolymer and ChemOps areas do not manufacture any of the chemicals listed in 40 CFR 60.667.
40 CFR 60, Subpart D	BW1 Boiler BW2 Boiler E Boiler L Boiler R Boiler BW Boiler	E and K	The boilers do not have a heat input rate greater than 250 million Btu per hour and do not meet the applicability criteria in 40 CFR 60.40(a).
40 CFR 60, Subpart VV	HPP CoPolymer and ChemOps	P and Q	The HPP CoPolymer and ChemOps areas do not manufacture any of the chemicals listed in 40 CFR 60.489.
40 CFR 60, Subpart DDD	Site manufacturing operations		Site operations do not manufacture polypropylene, polyethylene, polystyrene, or poly(ethylene terephthalate) as defined in 40 CFR 60.561.
40 CFR 60, Subpart FFF	Site manufacturing		The site does not have rotogravure printing lines used to coat flexible vinyl or urethane products.
40 CFR 60, Subpart TTT	Site manufacturing		Site manufacturing does not include spray booths in which plastic parts for use in the manufacture of business machines receive prime coats, color coats, texture coats, or touch-up coats (as those terms are defined in 40 CFR 60.721).
40 CFR 63, Subpart Q	All site industrial process cooling towers		The site industrial process cooling towers have not operated with chromium-based water treatment chemicals on or after September 8, 1994.
40 CFR 63, Subpart F, G, and H	V-525A V-525B	E	V-525A and V-525B are not part of a CMPU subject to the HON.
40 CFR 63, Subpart DD	Site operations		The site does not meet the criteria specified in 40 CFR 63.680(a)(2).
40 CFR 63, Subparts I and YY	LDF operations	M	The LDF is a research and development facility.
40 CFR 63, Subparts F, G and H	BPA Pilot Plant	F	The BPA Pilot Plant is a research and development facility.
40 CFR 63, Subpart J	Site manufacturing processes		Site manufacturing processes do not meet the applicability criteria in 40 CFR 63.211 (i.e., they are not a PVC plant, as defined in 40 CFR 61.61(c)).
40 CFR 63, Subpart U	Site manufacturing processes		Site manufacturing processes do not meet the applicability criteria in 40 CFR 63.480(a) because they do not manufacture an elastomer product, as defined in 40 CFR 63.482(b).
40 CFR 63, Subpart W	Site manufacturing processes		Site manufacturing processes do not meet the applicability criteria in 40 CFR 63.520 because they do not manufacture basic liquid epoxy resins (BLR) or wet strength resins (WSR), as defined in 40 CFR 63.522.
40 CFR 63, Subpart JJJ	Site manufacturing processes		Site manufacturing processes do not meet the applicability criteria in 40 CFR 63.1310(a) because they do not manufacture a thermoplastic product, as defined in 40 CFR 63.1312.

Rule	Does not apply to	Permit Section	Reason for Non-applicability
40 CFR 63, Subpart WWWW	Site manufacturing processes		Site manufacturing processes do not meet the applicability criteria in 40 CFR 63.5785 (i.e., they are not operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites.
326 IAC 8-6	Site source		The source is located in Posey County and commenced operation before October 7, 1974.
326 IAC 10-4	Site boilers		No site boiler meets the definition of a “large affected unit” or “electricity generating unit”, as defined in 326 IAC 10-4-2.

SECTION AA 40 CFR 63, Subpart F National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry

Definitions contained in 40 CFR Part 63, Subpart F, Section 101 are applicable to the Permittee.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

AA.1 General Standards [326 IAC 14][40 CFR 63.102, Subpart F]

(a) Pursuant to 40 CFR 63.102(a), the Permittee of sources subject to 40 CFR 63, Subpart F shall comply with the requirements of 40 CFR Part 63, Subparts G and H.

(1) The provisions set forth in 40 CFR Part 63, Subpart F and Subpart G shall apply at all times except during periods of start up or shutdown (as defined in 40 CFR 63.101), malfunction, or non operation of the chemical manufacturing process unit (or specific portion thereof) resulting in cessation of the emissions to which 40 CFR Part 63, Subpart F and Subpart G apply. However, if a start up, shutdown, malfunction or period of non operation of one portion of a chemical manufacturing process unit does not affect the ability of a particular emission point to comply with the specific provisions to which it is subject, then that emission point shall still be required to comply with the applicable provisions of 40 CFR Part 63, Subpart F and Subpart G during the start up, shutdown, malfunction or period of non operation. For example, if there is an overpressure in the reactor area, a storage vessel in the chemical manufacturing process unit would still be required to be controlled in accordance with 40 CFR 63.119. Similarly, the degassing of a storage vessel would not affect the ability of a process vent to meet the requirements of 40 CFR 63.113.

(2) The provisions set forth in 40 CFR Part 63, Subpart H shall apply at all times except during periods of start up or shutdown, as defined in 40 CFR 63.101(b), malfunction, process unit shutdown (as defined in 40 CFR 63.161), or non operation of the chemical manufacturing process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which 40 CFR Part 63, Subpart H applies.

(3) The Permittee shall not shut down items of equipment that are required or utilized for compliance with the provisions of 40 CFR Part 63, Subpart F, Subpart G or H during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment, if the shutdown would contravene requirements of 40 CFR Part 63, Subpart F, Subpart G or H applicable to such items of equipment. Paragraph 40 CFR 63.102(a)(3) does not apply if the item of equipment is malfunctioning, or if the Permittee must shut down the equipment to avoid damage due to a contemporaneous start up, shutdown, or malfunction of the chemical manufacturing process unit or portion thereof.

(4) During start ups, shutdowns, and malfunctions when the requirements 40 CFR Part 63, Subpart F, Subparts G and/or H do not apply pursuant to 40 CFR 63.102(a)(1) through 63.102(a)(3), the Permittee shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. For purposes of 40 CFR 63.102(a)(4), the term “excess emissions” means emissions in excess of those that would have occurred if there were no start up, shutdown, or malfunction and the Permittee complied with the relevant provisions of 40 CFR Part 63, Subpart F, Subparts G and/or H. The measures to be taken shall be identified in the applicable start up, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the source. Back up control devices are not required, but may be used if available.

(b) [Reserved]

(c) [Reserved]

(d) [Reserved]

AA.2 Heat Exchange System Requirements [326 IAC 14][40 CFR 63.104, Subpart F]

(a) Pursuant to 40 CFR 63.104(a), unless one or more of the conditions specified in 40 CFR 63.104(a)(1) through (a)(6) are met, the Permittee of sources subject to 40 CFR 63, Subpart F shall monitor each heat exchange system used to cool process equipment in a chemical manufacturing process unit meeting the conditions of 40 CFR 63.100(b)(1) through (b)(3), except for chemical

manufacturing process units meeting the condition specified in 40 CFR 63.100(c), according to the provisions in either 40 CFR 63.104(b) or (c). Whenever a leak is detected, the Permittee shall comply with the requirements in 40 CFR 63.102(d).

(1) The exchange system is operated with the minimum pressure on the cooling water side, at least 35 kilopascals greater than the maximum pressure on the process side.

(2) Intervening cooling fluid contains less than 5 percent by weight of total hazardous air pollutants as specified in table 4 of 40 CFR 63 Subpart F, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid and the intervening fluid is not sent through a cooling tower or discharged. For purposes of 40 CFR 63.104(a), discharge does not include emptying for maintenance purposes.

(3) [Reserved]

(4) [Reserved]

(5) The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in Table 4 of 40 CFR Part 63, Subpart F.

(6) The once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in Table 9 of 40 CFR Part 63, Subpart G.

(b) Pursuant to 40 CFR 63.104(b), the Permittee who elects to comply with the requirements of 40 CFR 63.104(a) by monitoring the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak shall comply with the requirements specified in 40 CFR 63.104(b)(1) through 63.104(b)(6). The cooling water shall be monitored for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system.

(1) The cooling water shall be monitored quarterly.

(2) (i) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in Table 4 of 40 CFR Part 63, Subpart F.

(ii) [Reserved]

(3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA approved method listed in Part 136 of 40 CFR Chapter I; as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by IDEM, OAQ.

(4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers. Entrance and exit points depend system type, definitions for each are provided in 40 CFR 63.104(b)(4)(i) through 63.104(b)(4)(iii):

(i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid.

(ii) For samples taken at the entrance and exit of once through heat exchange systems, the entrance is the point at which the cooling water enters and the exit is the point at which the cooling water exits the plant site or chemical manufacturing process units.

(iii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat

exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers.

(5) A minimum of three sets of samples shall be taken at each entrance and exit as defined in 40 CFR 63.104(b)(4). The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.

(6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.

(c) Pursuant to 40 CFR 63.104(c), the Permittee who elects to comply with the requirement of 40 CFR 63.104(a) by monitoring using a surrogate indicator of heat exchange system leaks shall comply with the requirements specified in 40 CFR 63.104(c)(1) through 63.104(c)(3). Surrogate indicators that could be used to develop an acceptable monitoring program are ion specific electrode monitoring, pH, conductivity or other representative indicators.

(1) The Permittee shall prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. The plan shall require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Monitoring that is already being conducted for other purposes may be used to satisfy the requirements of 40 CFR 63.104. The plan shall include the information specified in 40 CFR 63.104(c)(1)(i) and 63.104(c)(1)(ii).

(i) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak.

(ii) The parameter level(s) or conditions(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated.

(iii) The monitoring frequency which shall be no less frequent than quarterly.

(iv) [Applicable under AA.7]

(2) If a substantial leak is identified by methods other than those described in the monitoring plan and the method(s) specified in the plan could not detect the leak, the Permittee shall revise the plan and document the basis for the changes. The Permittee shall complete the revisions to the plan no later than 180 days after discovery of the leak.

(3) The Permittee shall maintain, at all times, the monitoring plan that is currently in use. The current plan shall be maintained on site, or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. If the monitoring plan is superseded, the Permittee shall retain the most recent superseded plan at least until 5 years from the date of its creation. The superseded plan shall be retained on site (or accessible from a central location by computer or other means that provides access within two hours after a request) for at least 6 months after its creation.

(d) Pursuant to 40 CFR 63.104(d), if a leak is detected according to the criteria of 40 CFR 63.104(b) or 63.104(c), the Permittee shall comply with the requirements in 40 CFR 63.104(d)(1) and 63.104(d)(2), except as provided in 40 CFR 63.104(e).

(1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the Permittee receives results of monitoring tests indicating a leak. The leak shall be repaired unless the Permittee demonstrates that the results are due to a condition other than a leak.

(2) Once the leak has been repaired, the Permittee shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.

(e) Pursuant to 40 CFR 63.104(e), delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions in 40 CFR 63.104(e)(1) or 63.104(e)(2) is met. All time periods in 40 CFR 63.104(e)(1) and 63.104(e)(2) shall be determined from the date when the Permittee determines that delay of repair is necessary.

(1) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required.

(2) If a shutdown is not expected within the next 2 months, the Permittee may delay repair as provided in 40 CFR 63.104(e)(2)(i) or 63.104(e)(2)(ii). Documentation of a decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical.

(i) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the Permittee may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The Permittee shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in 40 CFR 63.104(e)(2)(i)(A) and 63.104(e)(2)(i)(B).

(A) The Permittee shall calculate the potential emissions from the leaking heat exchanger by multiplying the concentration of total hazardous air pollutants listed in Table 4 of 40 CFR Part 63, Subpart F in the cooling water from the leaking heat exchanger by the flowrate of the cooling water from the leaking heat exchanger by the expected duration of the delay. The Permittee may calculate potential emissions using total organic carbon concentration instead of total hazardous air pollutants listed in Table 4 of 40 CFR Part 63, Subpart F.

(B) The Permittee shall determine emissions from purging and depressurizing the equipment that will result from the unscheduled shutdown for the repair.

(ii) If repair is delayed for reasons other than those specified in 40 CFR 63.104(e)(2)(i), the Permittee may delay repair up to a maximum of 120 calendar days. The Permittee shall demonstrate that the necessary parts or personnel were not available.

(f) [Applicable under Condition AA.7]

AA.3 Maintenance Wastewater Requirements [326 IAC 14][40 CFR 63.105, Subpart F]

(a) Pursuant to 40 CFR 63.105(a), each subject Permittee shall comply with the requirements 40 CFR 63.105(b) through 63.105(e) for maintenance wastewaters containing organic HAP's listed in Table 9 of 40 CFR Part 63, Subpart G.

(b) [Applicable under Condition AA.8]

(c) [Applicable under Condition AA.8]

(d) Pursuant to 40 CFR 63.105(d), the Permittee shall implement the procedures described in 40 CFR 63.105(b) and 63.105(c) as part of the start up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3) of Subpart A.

(e) [Applicable under Condition AA.8]

Compliance Determination Requirements

AA.4 General Compliance, Reporting, and Recordkeeping Provisions [326 IAC 14][40 CFR 63.103, Subpart F]

(a) [Reserved]

(b) Pursuant to 40 CFR 63.103(b), initial performance tests and initial compliance determinations shall be required only as specified in 40 CFR Part 63, Subparts G and H.

(1) Performance tests and compliance determinations shall be conducted according to the schedule and procedures in 40 CFR 63.7(a) of Subpart A and the applicable sections of 40 CFR Part 63, Subparts G and H.

(2) [Applicable under Condition AA.6]

(3) Performance tests shall be conducted according to the provisions of 40 CFR 63.7(a) of Subpart A, except that performance tests shall be conducted at maximum representative operating conditions for the process. During the performance test, the Permittee may operate the control or recovery device at maximum or minimum representative operating conditions for monitored control or recovery device parameters, whichever results in lower emission reduction.

(4) Data shall be reduced in accordance with the EPA approved methods specified in the applicable subpart or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of Appendix A of 40 CFR Part 63.

(5) [Applicable under Condition AA.6]

(6) [Reserved]

(c) [Applicable under AA.6]

(d) [Applicable under AA.6]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) [Reserved]

AA.5 Identification of Process Vents Subject to 40 CFR 63, Subpart F [326 IAC 14][40 CFR 63.107, Subpart F]

(a) Pursuant to 40 CFR 63.107(a), the Permittee shall use the criteria specified in 40 CFR 63.107 to determine whether there are any process vents associated with an air oxidation reactor, distillation unit, or reactor that is in a source subject to 40 CFR Part 63, Subpart F. A process vent is the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream has the characteristics specified in 40 CFR 63.107(b) through 63.107(h), or meets the criteria specified in 40 CFR 63.107(i).

(b) Pursuant to 40 CFR 63.107(b), some, or all, of the gas stream originates as a continuous flow from an air oxidation reactor, distillation unit, or reactor during operation of the chemical manufacturing process unit.

(c) Pursuant to 40 CFR 63.107(c), the discharge to the atmosphere (with or without passing through a control device) meets at least one of the conditions specified in 40 CFR 63.107(c)(1) through 63.107(c)(3).

(1) Is directly from an air oxidation reactor, distillation unit, or reactor; or

(2) Is from an air oxidation reactor, distillation unit, or reactor after passing solely (i.e., without passing through any other unit operation for a process purpose) through one or more recovery devices within the chemical manufacturing process unit; or

(3) Is from a device recovering only mechanical energy from a gas stream that comes either directly from an air oxidation reactor, distillation unit, or reactor, or from an air oxidation reactor, distillation unit, or reactor after passing solely (i.e., without passing through any other unit operation for a process purpose) through one or more recovery devices within the chemical manufacturing process unit.

(d) Pursuant to 40 CFR 63.107(d), the gas stream contains greater than 0.005 weight percent total organic HAP at the point of discharge to the atmosphere (or at the point of entry into a control device, if any).

(e) Pursuant to 40 CFR 63.107(e), the air oxidation reactor, distillation unit, or reactor is part of a chemical manufacturing process unit that meets the criteria of 40 CFR 63.100(b).

(f) Pursuant to 40 CFR 63.107(f), the gas stream is in the gas phase from the point of origin at the air oxidation reactor, distillation unit, or reactor to the point of discharge to the atmosphere (or to the point of entry into a control device, if any).

(g) Pursuant to 40 CFR 63.107(g), the gas stream is discharged to the atmosphere either on site, off site, or both.

(h) Pursuant to 40 CFR 63.107(h), the gas stream is not any of the items identified in 40 CFR 63.107(h)(1) through 63.107(h)(9).

(1) A relief valve discharge.

(2) A leak from equipment subject to 40 CFR Part 63, Subpart H.

(3) A gas stream going to a fuel gas system as defined in 40 CFR 63.101.

(4) A gas stream exiting a control device used to comply with 40 CFR

(5) A gas stream transferred to other processes (on site or off site) for reaction or other use in another process (i.e., for chemical value as a product, isolated intermediate, byproduct, or coproduct, or for heat value).

(6) A gas stream transferred for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse.

(7) A storage vessel vent or transfer operation vent subject to 40 CFR 63.119 or 63.126.

(8) A vent from a waste management unit subject to 40 CFR 63.132 through 63.137

(9) A gas stream exiting an analyzer.

(i) Pursuant to 40 CFR 63.107(i), the gas stream would meet the characteristics specified in 40 CFR 63.107(b) through 63.107(g), but, for purposes of avoiding applicability, has been deliberately interrupted, temporarily liquefied, routed through any item of equipment for no process purpose, or disposed of in a flare that does not meet the criteria in 40 CFR 63.11(b), or an incinerator that does not reduce emissions of organic HAP by 98 percent or to a concentration of 20 parts per million by volume, whichever is less stringent.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

AA.6 General Compliance, Reporting, and Recordkeeping Provisions [326 IAC 14][40 CFR 63.103, Subpart F]

(a) [Reserved]

(b) Pursuant to 40 CFR 63.103(b), initial performance tests and initial compliance determinations shall be required only as specified in 40 CFR 63, Subparts G and H.

(1) [Applicable under AA.4]

(2) The Permittee shall notify IDEM, OAQ of the intention to conduct a performance test at least 30 calendar days before the performance test is scheduled to allow IDEM, OAQ the opportunity to have an observer present during the test.

(3) [Applicable under AA.4]

(4) [Applicable under AA.4]

(5) Performance tests may be waived with approval of IDEM, OAQ as specified in 40 CFR 63.7(h)(2) of Subpart A. The Permittee of sources subject to 40 CFR Part 63, Subparts F, G, and H who apply for a waiver of a performance test shall submit the application by the dates specified in 40 CFR 63.103(b)(5)(i) rather than the dates specified in 40 CFR 63.7(h)(3) of Subpart A.

(i) If a request is made for an extension of compliance under 40 CFR 63.151(a)(6) or 40 CFR 63.6(i) of Subpart A, the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested, the

application for a waiver of an initial performance test shall be submitted no later than 90 calendar days before the Notification of Compliance Status required in 40 CFR 63.152(b) is due to be submitted.

(ii) Any application for a waiver of a performance test shall include information justifying the Permittee request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the required test.

(6) [Reserved]

(c) Pursuant to 40 CFR 63.103(c), the Permittee of a source subject to 40 CFR Part 63, Subparts F, G, and H shall keep copies of all applicable reports and records required by 40 CFR Part 63, Subparts F, G, and H. If the Permittee submits copies of reports to the applicable EPA Regional Office, the Permittee is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of 40 CFR 63.10(a)(4)(ii) for submittal of copies of reports, the Permittee is not required to maintain copies of reports.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining four and one half years of records may be retained offsite. Records may be maintained in hard copy or computer readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(2) The Permittee subject to 40 CFR Part 63, Subparts F, G, and H shall keep the records specified in Paragraph 40 CFR 63.103(c)(2), as well as records specified in 40 CFR Part 63, Subparts G and H.

(i) Records of the occurrence and duration of each start up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment or continuous monitoring systems used to comply with 40 CFR Part 63, Subpart F, Subpart G, or H during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occur.

(ii) For each start up, shutdown, and malfunction during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occur, records that the procedures specified in the source's start up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start up, shutdown, and malfunction plan includes procedures for routing a control device to a backup control device (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed. These records may take the form of a “checklist,” or other form of recordkeeping that confirms conformance with the start up, shutdown, and malfunction plan for the event.

(iii) For continuous monitoring systems used to comply with 40 CFR Part 63, Subpart G, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(3) Records of start up, shutdown and malfunction and continuous monitoring system calibration and maintenance are not required if they pertain solely to Group 2 emission points, as defined in 40 CFR 63.111, that are not included in an emissions average.

(d) Pursuant to 40 CFR 63.103(d), all reports required under 40 CFR Part 63, Subparts F, G, and H shall be sent to IDEM, OAQ and the US EPA at the addresses listed in 40 CFR 63.13 of Subpart A.

(1) Wherever 40 CFR Part 63, Subpart A specifies “postmark” dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent on or before the specified date.

(2) If acceptable to IDEM, OAQ, the US EPA, and the Permittee of a source, reports may be submitted on electronic media.

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) [Reserved]

AA.7 Heat Exchange System Requirements [326 IAC 14][63.104, Subpart F]

(a) [Applicable under AA.2]

(b) [Applicable under AA.2]

(c) [Applicable under AA.2]

(1) [Applicable under AA.2]

(i) [Applicable under AA.2]

(ii) [Applicable under AA.2]

(iii) [Applicable under AA.2]

(iv) The records will be maintained to document compliance with the 40 CFR 63.104(c) requirements.

(2) [Applicable under AA.2]

(3) [Applicable under AA.2]

(d) [Applicable under AA.2]

(e) [Applicable under AA.2]

(f) (1) Pursuant to 40 CFR 63.104(f)(1), the Permittee shall retain the records identified in 40 CFR 63.104(f)(1)(i) through 63.104(f)(1)(iv) as specified in 40 CFR 63.103(c)(1).

(i) Monitoring data required by 40 CFR 63.104(f) indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination;

(ii) Records of any leaks detected by procedures subject to 40 CFR 63.104(c)(2) and the date the leak was discovered;

(iii) The dates of efforts to repair leaks; and

(iv) The method or procedure used to confirm repair of a leak and the date repair was confirmed.

(2) Pursuant to 40 CFR 63.104(f)(2), if the Permittee invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the next semi annual periodic report required by 40 CFR 63.152(c). If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report, until repair of the leak is reported.

(i) The Permittee shall report the presence of the leak and the date that the leak was detected.

(ii) The Permittee shall report whether or not the leak has been repaired.

(iii) The Permittee shall report the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described in 40 CFR 63.104(e)(2), documentation of emissions estimates must also be submitted.

(iv) If the leak remains unrepaired, the Permittee shall report the expected date of repair.

(v) If the leak is repaired, the Permittee shall report the date the leak was successfully repaired.

AA.8 Maintenance Wastewater Requirements [326 IAC 14][40 CFR 63.105, Subpart F]

(a) [Applicable under Condition AA.3]

(b) Pursuant to 40 CFR 63.105(b), the Permittee shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:

(1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.

(2) Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and

(3) Specify the procedures to be followed when clearing materials from process equipment.

(c) Pursuant to 40 CFR 63.105(c), the Permittee shall modify and update the information required by 40 CFR 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.

(d) [Applicable under Condition AA.3]

(e) Pursuant to 40 CFR 63.105(e), the Permittee shall maintain a record of the information required by 40 CFR 63.105(b) and 63.105(c) as part of the start up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3) of Subpart A.

SECTION BB 40 CFR 63, Subpart G--National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater

Definitions contained in 40 CFR Part 63, Subpart G, Section 111 are applicable to the Permittee.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

BB.1 Emission Standard. [326 IAC 20-11] [40 CFR 63.112, Subpart G]

(a) Pursuant to 40 CFR 63.112(a), the Permittee of an existing source subject to the requirements of 40 CFR Part 63, Subpart G shall control emissions of organic HAP's to the level represented by the following equation:

$$E_A = 0.02\Sigma EPV_1 + \Sigma EPV_2 + 0.05\Sigma ES_1 + \Sigma ES_2 + 0.02\Sigma ETR_1 + \Sigma ETR_2 + \Sigma EWW_{1C} + \Sigma EWW_2$$

where:

EA = Emission rate, megagrams per year, allowed for the source.

0.02 ∑ EPV1 = Sum of the residual emissions, megagrams per year, from all Group 1 process vents, as defined in 40 CFR 63.111.

∑ EPV2 = Sum of the emissions, megagrams per year, from all Group 2 process vents as defined in 40 CFR 63.111.

0.05 ∑ ES1 = Sum of the residual emissions, megagrams per year, from all Group 1 storage vessels, as defined in 40 CFR 63.111.

∑ ES2 = Sum of the emissions, megagrams per year, from all Group 2 storage vessels, as defined in 40 CFR 63.111.

0.02 ∑ ETR1 = Sum of the residual emissions, megagrams per year, from all Group 1 transfer racks, as defined in 40 CFR 63.111.

∑ ETR2 = Sum of the emissions, megagrams per year, from all Group 2 transfer racks, as defined in 40 CFR 63.111.

∑ EWW1C = Sum of the residual emissions from all Group 1 wastewater streams, as defined in 40 CFR 63.111. EWW1C is calculated for each Group 1 stream according to the equation for EWW1C in 40 CFR 63.150(g)(5)(i)

∑ EWW2 = Sum of emissions from all Group 2 wastewater streams, as defined in 40 CFR 63.111.

The emissions level represented by the equation specified in 40 CFR 63.112(a) is dependent on the collection of emission points in the source. The level is not fixed and can change as the emissions from each emission point change or as the number of emission points in the source changes.

(b) [Reserved]

(c) Pursuant to 40 CFR 63.112(c), the Permittee of an existing source shall demonstrate compliance with the emission standard in 40 CFR 63.112(a) by following the procedures specified in 40 CFR 63.112(e) for all emission points, or by following the emissions averaging compliance approach specified in 40 CFR 63.112(f) for some emission points and the procedures specified in 40 CFR 63.112(e) for all other emission points within the source.

(d) [Reserved]

(e) Pursuant to 40 CFR 63.112(e), the Permittee of an existing or new source may comply with the process vent provisions in 40 CFR 63.113 through 63.118, the storage vessel provisions in 40 CFR 63.119 through 63.123, the transfer operation provisions in 40 CFR 63.126 through 63.130, the wastewater provisions in 40 CFR 63.131 through 63.147, the leak inspection provisions in 40 CFR 63.148, and the provisions in 40 CFR 63.149.

(1) The Permittee using this compliance approach shall also comply with the requirements of 40 CFR 63.151 and 63.152, as applicable.

(2) The Permittee using this compliance approach is not required to calculate the annual emission rate specified in 40 CFR 63.112(a).

(3) When emissions of different kinds (e.g., emissions from process vents, transfer operations, storage vessels, process wastewater, and/or in-process equipment subject to 40 CFR 63.149) are combined, and at least one of the emission streams would be classified as Group 1 in the absence of combination with other emission streams, the Permittee shall comply with the requirements of either 40 CFR 63.112(e)(3)(i) or 63.112(e)(3)(ii).

(i) Comply with the applicable requirements of 40 CFR Part 63, Subpart G for each kind of emissions in the stream (e.g., the requirements in 40 CFR 63.113 through 63.118 for process vents, and the requirements of 40 CFR 63.126 through 63.130 for transfer operations); or

(ii) Comply with the first set of requirements identified in 40 CFR 63.112(e)(3)(ii)(A) through 63.112(e)(3)(ii)(E) which applies to any individual emission stream that is included in the combined stream, where either that emission stream would be classified as Group 1 in the absence of combination with other emission streams, or the Permittee chooses to consider that emission stream to be Group 1 for purposes of 40 CFR 63.112(e)(3)(ii). Compliance with the first applicable set of requirements identified in 40 CFR 63.112(e)(3)(ii)(A) through 63.112(e)(3)(ii)(E) constitutes compliance with all other requirements in 40 CFR 63.112(e)(3)(ii)(A) through 63.112(e)(3)(ii)(E) applicable to other types of emissions in the combined stream.

(A) The requirements of 40 CFR Part 63, Subpart G for Group 1 process vents, including applicable monitoring, recordkeeping, and reporting;

(B) The requirements of 40 CFR Part 63, Subpart G for Group 1 transfer racks, including applicable monitoring, recordkeeping, and reporting;

(C) The requirements of 40 CFR 63.119(e) for control of emissions from Group 1 storage vessels, including monitoring, recordkeeping, and reporting;

(D) The requirements of 40 CFR 63.139 for control devices used to control emissions from waste management units, including applicable monitoring, recordkeeping, and reporting; or

(E) The requirements of 40 CFR 63.139 for closed vent systems for control of emissions from in-process equipment subject to 40 CFR 63.149, including applicable monitoring, recordkeeping, and reporting.

(f) Pursuant to 40 CFR 63.112(f), the Permittee of an existing source may elect to control some of the emission points within the source to different levels than specified under 40 CFR 63.113 through 63.148 by using an emissions averaging compliance approach as long as the overall emissions for the source do not exceed the emission level specified in 40 CFR 63.112(a). The Permittee using emissions averaging must meet the requirements in 40 CFR 63.112(f)(1) and 63.112(f)(2).

(1) Calculate emission debits and credits for those emission points involved in the emissions average as specified in 40 CFR 63.150; and

(2) Comply with the requirements of 40 CFR 63.151 and 63.152, as applicable.

(g) [Reserved]

(h) [Reserved]

BB.2 Process Vent Provisions - Reference Control Technology. [326 IAC 20-11] [63.113, Subpart G]

(a) Pursuant to 40 CFR 63.113(a), the Permittee of a Group 1 process vent as defined in 40 CFR Part 63, Subpart G shall comply with the requirements of, 63.113(a)(2).

(1) [Reserved]

(2) Pursuant to 40 CFR 63.113(a)(2), the Permittee shall reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen.

(i) Compliance with 40 CFR 63.113(a)(2) may be achieved by using any combination of combustion, recovery, and/or recapture devices, except that a recovery device may not be used to comply with 40 CFR 63.113(a)(2) by reducing emissions of total organic hazardous air pollutants by 98 weight-percent.

(ii) [Reserved]

(3) [Reserved]

(b) Pursuant to 40 CFR 63.113(b), if a boiler or process heater is used to comply with the percent reduction requirement or concentration limit specified in paragraph (a)(2) of this section, then the vent stream shall be introduced into the flame zone of such a device.

(c) [Reserved]

(d) Pursuant to 40 CFR 63.113(d), the Permittee of a Group 2 process vent, having a flow rate greater than or equal to 0.005 standard cubic meter per minute, a HAP concentration greater than or equal to 50 parts per million by volume, and a TRE index value greater than 1.0 but less than or equal to 4.0 shall maintain a TRE index value greater than 1.0 and shall comply with the monitoring of recovery device parameters in 40 CFR 63.114(b), the TRE index calculations of 40 CFR 63.115, and the applicable reporting and recordkeeping provisions of 40 CFR 63.117 and 63.118. Such Permittee is not subject to any other provisions of 40 CFR 63.114 through 63.118.

(e) Pursuant to 40 CFR 63.113(e), the Permittee of the Group 2 process vent with a TRE index value greater than 4.0 shall maintain a TRE index value greater than 4.0, comply with the provisions for calculation of a TRE index value in 40 CFR 63.115 and the reporting and recordkeeping provisions in 40 CFR 63.117(b), 63.118(c), and 63.118(h) and is not subject to monitoring or any other provisions of 40 CFR 63.114 through 63.118.

(f) Pursuant to 40 CFR 63.113(f), the Permittee of the Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute shall maintain a flow rate less than 0.005 standard cubic meter per minute; comply with the Group determination procedures in 40 CFR 63.115(a), 63.115(b), and 63.115(e); and the reporting and recordkeeping requirements in 40 CFR 63.117(c), and 40 CFR 63.118(d) and 63.118(i); and is not subject to monitoring or any other provisions of 40 CFR 63.114 through 63.118.

(g) [Reserved]

(h) Pursuant to 40 CFR 63.113(h), the Permittee of a process vent complying with 40 CFR 63.113(a)(2) is not required to perform the group determination described in 40 CFR 63.115.

(i) [Reserved]

BB.3 Process Vent Provisions - Monitoring Requirements. [326 IAC 20-11] [40 CFR 63.114, Subpart G]

(a) Pursuant to 40 CFR 63.114(a), the Permittee who owns a process vent that uses a combustion device to comply with the requirements in 63.113(a)(2), shall install monitoring equipment specified in 40 CFR 63.114(a)(1), 63.114(a)(2), 63.114(a)(3), 63.114(a)(4), or 63.114(a)(5), depending on the type of device used. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(b) Pursuant to 40 CFR 63.114(b), the Permittee that owns a process vent with a TRE index value greater than 1.0 as specified under 40 CFR 63.113(a)(3) or 63.113(d) that uses one or more recovery devices shall install either an organic monitoring device equipped with a continuous recorder or the monitoring equipment specified in 40 CFR 63.114(b)(1), 63.114(b)(2), or 63.114(b)(3), depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. Monitoring is not required for process vents with TRE index values greater than 4.0 as specified in 40 CFR 63.113(e).

(1) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder shall be used;

(2) Where a condenser is the final recovery device in the recovery system, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder shall be used;

(3) Where a carbon adsorber is the final recovery device in the recovery system, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle shall be used.

(c) [Reserved]

(d) Pursuant to 40 CFR 63.114(d), the Permittee who owns a process vent shall comply with 40 CFR 63.114(d)(1) or 63.114(d)(2) for any bypass line between the origin of the gas stream (i.e., at an air oxidation reactor, distillation unit, or reactor as identified in 40 CFR 63.107(b)) and the point where the gas stream reaches the process vent, as described in 40 CFR 63.107, that could divert the gas stream directly to the atmosphere. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to 40 CFR 63.114(d).

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in 40 CFR 63.118(a)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert the gas stream to the atmosphere; or

(2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and the gas stream is not diverted through the bypass line.

(e) Pursuant to 40 CFR 63.114(e), the Permittee shall establish a range that indicates proper operation of the control or recovery device for each parameter monitored under 40 CFR 63.114(a) and 63.114(b). In order to establish the range, the information required in 40 CFR 63.152(b) shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the Permittee is not required to conduct a performance test under 40 CFR 63.116, if the prior performance test was conducted using the same methods specified in 40 CFR 63.116 and either no process changes have been made since

the test, or the Permittee can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

BB.4 Process Wastewater Provisions - General. [326 IAC 12] [40 CFR 63.132, Subpart G]

(a) Pursuant to 40 CFR 63.132(a), requirements applicable to process wastewater streams located at existing sources are specified. The Permittee shall comply with the requirements in 40 CFR 63.132(a)(1) through 63.132(a)(3).

(1) Determine wastewater streams to be controlled for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G]. Determine whether each wastewater stream requires control for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] by complying with the requirements in either 40 CFR 63.132(a)(1)(i), and comply with the requirements in 40 CFR 63.132(a)(1)(iii).

(i) Comply with 40 CFR 63.132(c), determining whether the wastewater stream is Group 1 or Group 2 for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G]; or

(ii) [Reserved]

(iii) Comply with 40 CFR 63.132(f).

(2) [Reserved]

(3) Requirements for Group 2 wastewater streams. For wastewater streams that are Group 2 for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G], comply with the applicable recordkeeping and reporting requirements specified in 40 CFR 63.146(b)(1) and 63.147(b)(8).

(b) [Reserved]

(c) [Applicable under BB.7]

(d) [Reserved]

(e) [Reserved]

(f) Pursuant to 40 CFR 63.132(f), the Permittee shall not discard liquid or solid organic materials with a concentration of greater than 10,000 parts per million of Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of 40 CFR 63.144(b)) from a chemical manufacturing process unit to water or wastewater, unless the receiving stream is managed and treated as a Group 1 wastewater stream. This prohibition does not apply to materials from the activities listed in 40 CFR 63.132(f)(1) through 63.132(f)(4).

(1) Equipment leaks;

(2) Activities included in maintenance or startup/shutdown/malfunction plans;

(3) Spills; or

(4) Samples of a size not greater than reasonably necessary for the method of analysis that is used.

(g) [Reserved]

BB.5 Emissions Averaging Provisions. [326 IAC 20-11] [40 CFR 63.150, Subpart G]

(a) Pursuant to 40 CFR 63.150(a), the Permittee who seeks to comply with the emission standard in 40 CFR 63.112(a) by using emissions averaging according to 40 CFR 63.112(f) rather than following the provisions of 40 CFR 63.113 through 63.148. Notwithstanding the definition of process vent in 40 CFR 63.101 and the sampling site designation in 40 CFR 63.115(a), for purposes of 40 CFR 63.150(a) the location of a process vent shall be defined, and the characteristics of its gas stream shall be determined, consistent with 40 CFR 63.150(g)(2)(i).

(b) [Reserved]

(c) Pursuant to 40 CFR 63.150(c), the following emission points can be used to generate emissions averaging credits, if control was applied after November 15, 1990 and if sufficient information is available to determine the appropriate value of credits for the emission point:

(1) Group 2 emission points.

(2) [Reserved]

(3) [Reserved]

(d) [Reserved]

(e) [Applicable under BB.15]

(f) [Applicable under BB.9]

(g) [Applicable under BB.9]

(h) [Applicable under BB.9]

(i) [Reserved]

(j) [Reserved]

(k) Pursuant to 40 CFR 63.150(k), the Permittee must demonstrate that the emissions from the emission points proposed to be included in the average will not result in greater hazard than if the emission points were controlled according to the provisions in 40 CFR 63.113 through 63.148.

(1) This demonstration of hazard or risk equivalency shall be made to the satisfaction of IDEM, OAQ.

(i) IDEM, OAQ may require Permittee to use specific methodologies and procedures for making a hazard or risk determination.

(ii) The demonstration and approval of hazard or risk equivalency shall be made according to any guidance that IDEM, OAQ makes available for use.

(2) The Permittee shall provide documentation demonstrating the hazard or risk equivalency of their proposed emissions average in their operating permit application or in their Implementation Plan if an operating permit application has not yet been submitted.

(3) An emissions averaging plan that does not demonstrate hazard or risk equivalency to the satisfaction of IDEM, OAQ shall not be approved. IDEM, OAQ may require such adjustments to the emissions averaging plan as are necessary in order to ensure that the average will not result in greater hazard or risk to human health or the environment than would result if the emission points were controlled according to 40 CFR 63.113 through 63.148.

(4) A hazard or risk equivalency demonstration must:

(i) Be a quantitative, bona fide chemical hazard or risk assessment;

(ii) Account for differences in chemical hazard or risk to human health or the environment; and

(iii) Meet any requirements set by IDEM, OAQ for such demonstrations.

(l) [Reserved]

(m) Pursuant to 40 CFR 63.150(m), for each Group 1 or Group 2 emission point included in an emissions average, the Permittee shall perform testing, monitoring, recordkeeping, and reporting equivalent to that required for Group 1 emission points complying with 40 CFR 63.113 through 63.148. The specific requirements for process vents, storage vessels, transfer racks, and wastewater are identified in 40 CFR 63.150(m)(1) through 63.150(m)(6).

(1) The source shall implement the following testing, monitoring, recordkeeping, and reporting procedures for each process vent equipped with a flare, incinerator, boiler, or process heater.

(i) Determine, consistent with 40 CFR 63.150(g)(2)(i), whether the process vent is Group 1 or Group 2 according to the procedures in 40 CFR 63.115;

(ii) [Reserved]

(iii) Monitor the operating parameters, keep records, and submit reports specified in 40 CFR 63.114, 63.117(a), 63.118(a), 63.118(f), and 63.118(g), as appropriate for the specific control device.

(2) The source shall implement the following procedures for each process vent equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device:

(i) Determine, consistent with 40 CFR 63.150(g)(2)(i), the flow rate, organic HAP concentration, and TRE index value using the methods specified in 40 CFR 63.115;

(ii) Monitor the operating parameters, keep records, and submit reports specified in 40 CFR 63.114, 63.117(a), 63.118(a), 63.118(f), and 63.118(g), as appropriate for the specific recovery device.

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(6) [Reserved]

(n) [Applicable under BB.15]

(o) [Applicable under BB.15]

Compliance Determination Requirements

BB.6 Process Vent Provisions - Methods and Procedures for Process Vent Group Determination. [326 IAC 20-11] [40 CFR 63.115, Subpart G]

(a) Pursuant to 40 CFR 63.115(a), for purposes of determining vent stream flow rate, total organic HAP or total organic carbon concentration or TRE index value, as specified under 40 CFR 63.115(b), 63.115(c), or 63.115(d) the sampling site shall be after the last recovery device (if any recovery devices are present) but prior to the inlet of any control device that is present and prior to release to the atmosphere.

(1) Method 1 or 1A of 40 CFR Part 60, Appendix A, as appropriate, shall be used for selection of the sampling site.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.

(b) Pursuant to 40 CFR 63.115(b), to demonstrate that a vent stream flow rate is less than 0.005 standard cubic meter per minute in accordance with the Group 2 process vent definition of 40 CFR Part 63, Subpart G, the Permittee shall measure flow rate by the following procedures:

(1) The sampling site shall be selected as specified in 40 CFR 63.115(a).

(2) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR Part 60, Appendix A, as appropriate.

(c) Pursuant to 40 CFR 63.115(c), the Permittee seeking to demonstrate that a vent stream has an organic HAP concentration below 50 parts per million by volume in accordance with the Group 2 process vent definition of 40 CFR 63, Subpart G shall measure either total organic HAP or TOC concentration using the following procedures:

(1) The sampling site shall be selected as specified in 40 CFR 63.115(a).

(2) Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used.

(3) Where Method 18 of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate parts per million by volume concentration:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(ii) The concentration of either TOC (minus methane and ethane) or organic HAP shall be calculated according to 40 CFR 63.115(c)(3)(ii)(A) or (c)(3)(ii)(B) as applicable.

(A) The TOC concentration (CTOC) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \frac{\sum_{i-1}^{x}\left(\sum_{j-1}^{x} C_{ji}\right)}{X}$$

where:

CTOC	=	Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.
Cji	=	Concentration of sample component j of the sample i, dry basis, parts per million by volume.
n	=	Number of components in the sample.
x	=	Number of samples in the sample run.

(B) The total organic HAP concentration (CHAP) shall be computed according to the equation in 40 CFR 63.115(c)(3)(ii)(A) except that only the organic HAP species shall be summed. The list of organic HAP's is provided in table 2 of 40 CFR 63, Subpart F.

(4) Where Method 25A of 40 CFR part 60, appendix A is used, the following procedures shall be used to calculate parts per million by volume TOC concentration:

(i) Method 25A of 40 CFR part 60, appendix A, shall be used only if a single organic HAP compound is greater than 50 percent of total organic HAP, by volume, in the vent stream.

(ii) The vent stream composition may be determined by either process knowledge, test data collected using an appropriate EPA method, or a method or data validated according to the protocol in Method 301 of appendix A of this part. Examples of information that could constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current vent stream conditions.

(iii) The organic HAP used as the calibration gas for Method 25A of 40 CFR part 60, appendix A shall be the single organic HAP compound present at greater than 50 percent of the total organic HAP by volume.

(iv) The span value for Method 25A of 40 CFR part 60, appendix A shall be 50 parts per million by volume.

(v) Use of Method 25A of 40 CFR part 60, appendix A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of

the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(vi) The Permittee shall demonstrate that the concentration of TOC including methane and ethane measured by Method 25A of 40 CFR part 60, appendix A is below 25 parts per million by volume to be considered a Group 2 vent with an organic HAP concentration below 50 parts per million by volume and to qualify for the low concentration exclusion in 40 CFR 63.113(g).

(d) Pursuant to 40 CFR 63.115(d), to determine the TRE index value, the Permittee shall conduct a TRE determination and calculate the TRE index value according to the procedures in 40 CFR 63.115(d)(1) or 63.115(d)(2) and the TRE equation in 40 CFR 63.115(d)(3).

(1) Engineering assessment may be used to determine vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value.

(i) If the TRE value calculated using such engineering assessment and the TRE equation in 40 CFR 63.115(d)(3) is greater than 4.0, then the Permittee is not required to perform the measurements specified in 40 CFR 63.115(d)(2).

(ii) If the TRE value calculated using such engineering assessment and the TRE equation in 40 CFR 63.115(d)(3) is less than or equal to 4.0, then the Permittee is required to perform the measurements specified in 40 CFR 63.115(d)(2) for group determination or consider the process vent a Group 1 vent and comply with the emission reduction specified in 40 CFR 63.113(a).

(iii) Engineering assessment includes, but is not limited to, the following:

(A) Previous test results provided the tests are representative of current operating practices at the process unit.

(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(C) Maximum flow rate, TOC emission rate, organic HAP emission rate, or net heating value limit specified or implied within a permit limit applicable to the process vent.

(D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

(1) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations,

(2) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities,

(3) Estimation of TOC or organic HAP concentrations based on saturation conditions,

(4) Estimation of maximum expected net heating value based on the vent stream concentration of each organic compound or, alternatively, as if all TOC in the vent stream were the compound with the highest heating value.

(E) All data, assumptions, and procedures used in the engineering assessment shall be documented.

(2) Except as provided in 40 CFR 63.115(d)(1), vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate shall be measured and calculated according to the procedures in 40 CFR 63.115(d)(2)(i) through 63.115(d)(2)(v) and used as input to the TRE index value calculation in 40 CFR 63.115(d)(3).

(i) The vent stream volumetric flow rate (Qs), in standard cubic meters per minute at 20 degrees Celcius, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR Part 60, Appendix A, as appropriate. If the vent stream tested passes through a final steam jet ejector and is not condensed, the vent stream volumetric flow shall be corrected to 2.3 percent moisture.

(ii) The molar composition of the vent stream, which is used to calculate net heating value, shall be determined using the following methods:

(A) Method 18 of 40 CFR Part 60, Appendix A to measure the concentration of each organic compound.

(B) American Society for Testing and Materials D1946–77 to measure the concentration of carbon monoxide and hydrogen.

(C) Method 4 of 40 CFR Part 60, Appendix A, to measure the moisture content of the vent stream.

(iii) The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1 \left(\sum_{j=1}^{n} C_j H_j \right) \left(1 - B_{ws} \right)$$

where:

HT = Net heating value of the sample, megaJoule per standard cubic meter, where the net enthalpy per mole of vent stream is based on combustion at 25℃ and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to one mole is 20℃, as in the definition of Qs (vent stream flow rate).

Kl = Constant, 1.740×10-7 (parts per million)-1 (gram-mole per standard cubic meter) (megaJoule per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20℃.

Bws = Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final steam jet and is not condensed, it shall be assumed that

Bws = 0.023 in order to correct to 2.3 percent moisture.

Cj = Concentration on a dry basis of compound j in parts per million, as measured for all organic compounds by Method 18 of 40 CFR Part 60, Appendix A and measured for hydrogen and carbon monoxide by American Society for Testing and Materials D1946–77 as indicated in 40 CFR 63.115(d)(2)(ii).

Hj = Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25℃ and 760 millimeters mercury. The heats of combustion of vent stream components shall be determined using American Society for Testing and Materials D2382–76 if published values are not available or cannot be calculated.

(iv) The emission rate of TOC (minus methane and ethane) (ETOC) and the emission rate of total organic HAP (EHAP) in the vent stream shall both be calculated using the following equation:

$$E = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

where:

E = Emission rate of TOC (minus methane and ethane) or emission rate of total organic HAP in the sample, kilograms per hour.

K2 = Constant, 2.494×10-6 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20°C.
Cj = Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR Part 60, Appendix A as indicated in 40 CFR 63.115(d)(2)(ii). If the TOC emission rate is being calculated, Cj includes all organic compounds measured minus methane and ethane; if the total organic HAP emission rate is being calculated, only organic HAP compounds listed in Table 2 of 40 CFR Part 63, Subpart F are included.

Mj = Molecular weight of organic compound j, gram/gram-mole.

Qs = Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20°C.

(v) [Reserved]

(3) The Permittee shall calculate the TRE index value of the vent stream using the equations and procedures in 40 CFR 63.115(d)(3).

(i) The equation for calculating the TRE index for a vent stream controlled by a flare or incinerator is as follows:

$$TRE = \frac{1}{E_{HAP}}\left[a + b(Q_s) + c(H_T) + d(E_{TOC})\right]$$

where:

TRE = TRE index value.

EHAP = Hourly emission rate of total organic HAP, kilograms per hour, as calculated in 40 CFR 63.115(d)(1) or 63.115(d)(2)(iv).

Qs = Vent stream flow rate, standard cubic meters per minute, at a standard temperature of 20°C, as calculated in 40 CFR 63.115(d)(1) or 63.115(d)(2)(i).

HT = Vent stream net heating value, megaJoules per standard cubic meter, as calculated in 40 CFR 63.115(d)(1) or 63.115(d)(2)(iii).

ETOC = Emission rate of TOC (minus methane and ethane), kilograms per hour, as calculated in 40 CFR 63.115(d)(1) or 63.115(d)(2)(iv).

a,b,c,d = Coefficients presented in Table 1 of 40 CFR Part 63, Subpart G, selected in accordance with 63.115(d)(3)(ii) and 63.115(d)(3)(iii).

(ii) The Permittee of a nonhalogenated vent stream shall calculate the TRE index value based on the use of a flare, a thermal incinerator with 0 percent heat recovery, and a thermal incinerator with 70 percent heat recovery and shall select the lowest TRE index value. The Permittee shall use the applicable coefficients in Table 1 of 40 CFR Part 63, Subpart G for nonhalogenated vent streams located within existing sources and the applicable coefficients in Table 2 of 40 CFR Part 63, Subpart G for nonhalogenated vent streams located within new sources.

(iii) [Reserved]

(e) Pursuant to 40 CFR 63.115(e), the Permittee of a Group 2 process vent shall recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine whether the vent is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the vent to a Group 1 vent. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery

equipment. For purposes of 40 CFR 63.115(e), process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original TRE calculation was based.

(1) The TRE index value, flow rate, or organic HAP concentration shall be recalculated based on measurements of vent stream flow rate, TOC, and organic HAP concentrations, and heating values as specified in 40 CFR 63.115(a), 63.115(b), 63.115(c), and 63.115(d), as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in 40 CFR 63.115(d)(1).

(2) [Applicable under BB.10]

(f) Pursuant to 40 CFR 63.115(f), notwithstanding any other provisions of 40 CFR 63, Subpart G, in any case where a process vent includes one or more gas streams that are not from a source subject to 40 CFR 63, Subpart G (hereafter called “non-HON streams” for purposes of this paragraph), and one or more gas streams that meet the criteria in 40 CFR 63.107(b) through (h) or the criteria in 40 CFR 63.107(i) (hereafter called “HON streams” for purposes of this paragraph), the Permittee may elect to comply with paragraphs 40 CFR 63.115(f)(1) through (3).

(1) The Permittee may determine the characteristics (flow rate, total organic HAP concentration, and TRE index value) for each HON stream, or combination of HON streams, at a representative point as near as practical to, but before, the point at which it is combined with one or more non-HON streams.

(2) If one or more of the HON streams, or combinations of HON streams, has the characteristics (determined at the location specified in 40 CFR 63.115(f)(1)) associated with a Group 1 process vent, the combined vent stream is a Group 1 process vent. Except as specified in 40 CFR 64.115(f)(3), if none of the HON streams, or combinations of HON streams, when determined at the location specified in 40 CFR 63.115(f)(1), has the characteristics associated with a Group 1 process vent, the combined vent stream is a Group 2 process vent regardless of the TRE index value determined at the location specified in 40 CFR 63.115(a). If the combined vent stream is a Group 2 process vent as determined by the previous sentence, but one or more of the HON streams, or combinations of HON streams, has a TRE index value greater than 1 but less than or equal to 4, the combined vent stream is a process vent with a TRE index value greater than 1 but less than or equal to 4. In this case, the Permittee shall monitor the combined vent stream as required by 40 CFR 63.114(b).

(3) 40 CFR 63.115(f)(1) and (2) are not intended to apply instead of any other subpart of 40 CFR 63. If another subpart of 40 CFR 63 applies to one or more of the non-HON streams contributing to the combined vent stream, that subpart may impose emission control requirements such as, but not limited to, requiring the combined vent stream to be classified and controlled as a Group 1 process vent.

BB.7 Process Wastewater Provisions - General. [326 IAC 12] [40 CFR 63.132, Subpart G]

(a) [Applicable under BB.4]

(b) [Reserved]

(c) Pursuant to 40 CFR 63.132(c), the Permittee shall determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G]. Total annual average concentration shall be determined according to the procedures specified in 40 CFR 63.144(b). Annual average flow rate shall be determined according to the procedures specified in 40 CFR 63.144(c).

(1) A wastewater stream is a Group 1 wastewater stream for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] if:

(i) The total annual average concentration of Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] is greater than or equal to 10,000 parts per million by weight at any flow rate; or

(ii) The total annual average concentration of Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] is greater than or equal to 1,000 parts per million by weight and the annual average flow rate is greater than or equal to 10 liters per minute.

(2) A wastewater stream is a Group 2 wastewater stream for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] if it is not a Group 1 wastewater stream for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] by the criteria in 40 CFR 63.132(c)(1) .

(d) [Reserved]

(e) [Reserved]

(f) [Applicable under BB.4]

(g) [Reserved]

BB.8 Process Wastewater Provisions - Test Methods and Group Determination. [326 IAC 12] [40 CFR 63.144, Subpart G]

(a) Pursuant to 40 CFR 63.144(a), procedures to determine applicability. A Permittee shall comply with 40 CFR 63.144(a)(1) or 63.144(a)(2) for each wastewater stream to determine which wastewater streams require control for Table 8 and/or Table 9 compounds [Tables found in 40 CFR Part 63, Subpart G]. The Permittee may use a combination of the approaches in 40 CFR 63.144(a)(1) and 63.144(a)(2) for different wastewater streams generated at the source.

(1) Determine Group 1 or Group 2 status. Determine whether a wastewater stream is a Group 1 or Group 2 wastewater stream in accordance with 40 CFR 63.144(b) and 63.144(c).

(2) Designate as Group 1. A Permittee may designate as a Group 1 wastewater stream a single wastewater stream or a mixture of wastewater streams. The Permittee is not required to determine the concentration or flow rate for each designated Group 1 wastewater stream for the purposes of 40 CFR 63.144.

(b) Pursuant to 40 CFR 63.144(b), procedures to establish concentrations, when determining Group status under 40 CFR 63.144(a)(1). A Permittee who elects to comply with the requirements of 40 CFR 63.144(a)(1) shall determine the annual average concentration for Table 8 and/or Table 9 compounds [Tables found in 40 CFR Part 63, Subpart G] according to 40 CFR 63.144(b)(1) for existing sources. The annual average concentration shall be a flow weighted average representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12 month period. For flexible operation units, the Permittee shall consider the anticipated production over the designated 12 month period and include all wastewater streams generated by the process equipment during this period. The Permittee is not required to determine the concentration of Table 8 or Table 9 compounds that are not reasonably expected to be in the process [Tables found in 40 CFR Part 63, Subpart G].

(1) Existing sources. A Permittee of an existing source who elects to comply with the requirements of 40 CFR 63.144(a)(1) shall determine the flow weighted total annual average concentration for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G]. For the purposes of 40 CFR 63.144, the term concentration, whether concentration is used alone or with other terms, may be adjusted by multiplying by the compound-specific fraction measured (Fm) factors listed in Table 34 of 40 CFR Part 63, Subpart G unless determined by the methods in 40 CFR 63.144(b)(5)(i)(A) and/or 63.144(b)(5)(i)(B). When concentration is determined by Method 305 as specified in 40 CFR 63.144(b)(5)(i)(B), concentration may be adjusted by dividing by the compound-specific Fm factors listed in Table 34 of 40 CFR Part 63, Subpart G. When concentration is determined by Method 25D as specified in 40 CFR 63.144(b)(5)(i)(A), concentration may not be adjusted by the compound-specific Fm factors listed in Table 34 of 40 CFR Part 63, Subpart G. Compound-specific Fm factors may be used only when concentrations of individual compounds are determined or when only one compound is in the wastewater stream. Flow weighted total annual average concentration for Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] means the total mass of Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] occurring in the wastewater stream during the designated 12-month period divided by the total mass of the wastewater stream during the same designated 12-month period. The total annual average concentration shall be determined for each wastewater stream either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to 40 CFR 63.144(b)(6). The procedures specified in 40 CFR 63.144(b)(3), 63.144(b)(4), and 63.144(b)(5) are considered acceptable procedures for determining the annual average

concentration. They may be used in combination, and no one procedure shall take precedence over another.

(2) [Reserved]

(3) Knowledge of the wastewater. Where knowledge is used to determine the annual average concentration, the Permittee shall provide sufficient information to document the annual average concentration for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average concentration is not required for Group 1 streams. Examples of acceptable documentation include material balances, records of chemical purchases, process stoichiometry, or previous test results. If test data are used, the Permittee shall provide documentation describing the testing protocol and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination.

(4) Bench-scale or pilot-scale test data. Where bench-scale or pilot-scale test data are used to determine the annual average concentration, the Permittee shall provide sufficient information to document that the data are representative of the actual annual average concentration, or are reliably indicative of another relevant characteristic of the wastewater stream that could be used to predict the annual average concentration. For concentration data, the Permittee shall also provide documentation describing the testing protocol, and the means by which any losses of volatile compounds during sampling, and the bias and accuracy of the analytical method, were accounted for in the determination of annual average concentration.

(5) Test data from sampling at the point of determination or at a location downstream of the point of determination. Where a Permittee elects to comply with 40 CFR 63.144(a)(1) by measuring the concentration for the relevant Table 8 or Table 9 compounds [Tables found in 40 CFR Part 63, Subpart G], the Permittee shall comply with the requirements of 40 CFR 63.144(b)(5). For each wastewater stream, measurements shall be made either at the point of determination, or downstream of the point of determination with adjustment for concentration changes made according to 40 CFR 63.144(b)(6). A minimum of three samples from each wastewater stream shall be taken. Samples may be grab samples or composite samples.

(i) Methods. The Permittee shall use any of the methods specified in 40 CFR 63.144(b)(5)(i)(A) through 63.144(b)(5)(i)(F).

(A) Method 25D. Use procedures specified in Method 25D of 40 CFR Part 60, Appendix A.

(B) Method 305. Use procedures specified in Method 305 of 40 CFR Part 63, Appendix A.

(C) Methods 624 and 625. Use procedures specified in Methods 624 and 625 of 40 CFR Part 136, Appendix A and comply with the sampling protocol requirements specified in 40 CFR 63.144(b)(5)(ii). If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed. For Method 625, make corrections to the compounds for which the analysis is being conducted based on the accuracy as recovery factors in Table 7 of the Method.

(D) Method 1624 and Method 1625. Use procedures specified in Method 1624 and Method 1625 of 40 CFR Part 136, Appendix A and comply with the requirements specified in 40 CFR 63.144(b)(5)(ii). If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed.

(E) Other EPA method(s). Use procedures specified in the method and comply with the requirements specified in 40 CFR 63.144(b)(5)(ii) and either 63.144(b)(5)(iii)(A) or 63.144(b)(5)(iii)(B).

(F) Method(s) other than EPA method. Use procedures specified in the method and comply with the requirements specified in 40 CFR 63.144(b)(5)(ii) and 63.144(b)(5)(iii)(A).

(ii) Sampling plan. The Permittee who is expressly referred to 40 CFR 63.144(b)(5)(ii) by provisions of 40 CFR Part 63, Subpart G shall prepare a sampling plan. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity. The sample plan shall include procedures for determining recovery efficiency of the relevant hazardous air pollutants listed in Table 8 or Table 9 [Tables found in 40 CFR Part 63, Subpart G]. An example of an acceptable sampling plan would be one that incorporates similar sampling and sample handling requirements to those of Method 25D of 40 CFR Part 60, Appendix A. The sampling plan shall be maintained at the facility.

(iii) Validation of methods. The Permittee shall validate EPA methods other than Methods 25D, 305, 624, 625, 1624, and 1625 using the procedures specified in 40 CFR 63.144(b)(5)(iii)(A) or 63.144(b)(5)(iii)(B). The Permittee shall validate other methods as specified in 40 CFR 63.144(b)(5)(iii)(A).

(A) Validation of EPA methods and other methods. The method used to measure organic hazardous air pollutants concentrations in the wastewater shall be validated according to section 5.1 or 5.3, and the corresponding calculations in section 6.1 or 6.3, of Method 301 of Appendix A of 40 CFR Part 63. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of Method 301 of Appendix A of 40 CFR Part 63. If correction is required under section 6.3.3 of Method 301 of Appendix A of 40 CFR Part 63, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 of Appendix A of 40 CFR Part 63 are not required. The concentrations of the individual organic hazardous air pollutants measured in the water may be corrected to their concentrations had they been measured by Method 305 of Appendix A of 40 CFR Part 63, by multiplying each concentration by the compound-specific fraction measured (Fm) factor listed in Table 34 of 40 CFR Part 63, Subpart G.

(B) Validation for EPA methods. Follow the procedures as specified in “Alternative Validation Procedure for EPA Waste Methods” 40 CFR Part 63, Appendix D.

(iv) Calculations of average concentration. The average concentration for each individually speciated Table 8 compound [Table found in 40 CFR Part 63, Subpart G] shall be calculated by adding the individual values determined for the specific compound in each sample and dividing by the number of samples. The total average concentration of Table 9 compounds [Table found in 40 CFR Part 63, Subpart G] shall be calculated by first summing the concentration of the individual compounds to obtain a total hazardous air pollutants concentration for the sample; add the sample totals and then divide by the number of samples in the run to obtain the sample average for the run. If the method used does not speciate the compounds, the sample results should be added and this total divided by the number of samples in the run to obtain the sample average for the run.

(6) Adjustment for concentrations determined downstream of the point of determination. The Permittee shall make corrections to the annual average concentration or total annual average concentration when the concentration is determined downstream of the point of determination at a location where: two or more wastewater streams have been mixed; one or more wastewater streams have been treated; or, losses to the atmosphere have occurred. The Permittee shall make the adjustments either to the individual data points or to the final annual average concentration.

(c) Pursuant to 40 CFR 63.144(c), the procedures to determine flow rate, when evaluating Group status under 40 CFR 63.144(a)(1) are specified. A Permittee who elects to comply with 40 CFR 63.144(a)(1) shall determine the annual average flow rate of the wastewater stream either at the point of determination for each wastewater stream, or downstream of the point of determination with adjustment for flow rate changes made according to 40 CFR 63.144(c)(4). These procedures

may be used in combination for different wastewater streams at the source. The annual average flow rate for the wastewater stream shall be representative of actual or anticipated operation of the chemical manufacturing process unit generating the wastewater over a designated 12-month period. The Permittee shall consider the total annual wastewater volume generated by the chemical manufacturing process unit. If the chemical manufacturing process unit is a flexible operation unit, the Permittee shall consider all anticipated production in the process equipment over the designated 12-month period. The procedures specified in 40 CFR 63.144(c)(1), 63.144(c)(2), and 63.144(c)(3) are considered acceptable procedures for determining the flow rate. They may be used in combination, and no one procedure shall take precedence over another.

(1) Knowledge of the wastewater. The Pemittee may use knowledge of the wastewater stream and/or the process to determine the annual average flow rate. The Permittee shall use the maximum expected annual average production capacity of the process unit, knowledge of the process, and/or mass balance information to either: Estimate directly the annual average wastewater flow rate; or estimate the total annual wastewater volume and then divide total volume by 525,600 minutes in a year. Where knowledge is used to determine the annual average flow rate, the Permittee shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(2) Historical Records. The Permittee may use historical records to determine the annual average flow rate. Derive the highest annual average flow rate of wastewater from historical records representing the most recent 5 years of operation or, if the process unit has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the process unit. Where historical records are used to determine the annual average flow rate, the Permittee shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(3) Measurements of flow rate. Where a Permittee elects to comply with 40 CFR 63.144(a)(1) by measuring the flow rate, the Permittee shall comply with the requirements of 40 CFR 63.144(c)(3). Measurements shall be made at the point of determination, or at a location downstream of the point of determination with adjustments for flow rate changes made according to 40 CFR 63.144(c)(4). Where measurement data are used to determine the annual average flow rate, the Permittee shall provide sufficient information to document the flow rate for wastewater streams determined to be Group 2 wastewater streams. Documentation to determine the annual average flow rate is not required for Group 1 streams.

(4) Adjustment for flow rates determined downstream of the point of determination. The Permittee shall make corrections to the annual average flow rate of a wastewater stream when it is determined downstream of the point of determination at a location where two or more wastewater streams have been mixed or one or more wastewater streams have been treated. The Permittee shall make corrections for such changes in the annual average flow rate.

BB.9 Procedures for Calculating Debits and Credits For Emissions Averaging [326 IAC 20-11] [40 CFR 63.150, Subpart G]

(a) [Applicable under BB.5]

(b) [Reserved]

(c) [Applicable under BB.5]

(d) [Reserved]

(e) [Applicable under BB.5]

(f) Pursuant to 40 CFR 63.150(f), debits and credits shall be calculated in accordance with the methods and procedures specified in 40 CFR 63.150(g) and 63.150(h), respectively, and shall not include emissions from the following:

(1) [Reserved]

(2) Periods of start-up, shutdown, and malfunction as described in the source's start-up, shutdown, and malfunction plan required by 40 CFR 63.6(e)(3) of Subpart A.

(3) Periods of monitoring excursions as defined in 40 CFR 63.152(c)(2)(ii)(A). For these periods, the calculation of monthly credits and debits shall be adjusted as specified in 40 CFR 63.150(f)(3)(i) through 63.150 (f)(3)(iii).

(i) No credits would be assigned to the credit-generating emission point.

(ii) Maximum debits would be assigned to the debit-generating emission point.

(iii) [Reserved]

(g) Pursuant to 40 CFR 63.150(g), debits are generated by the difference between the actual emissions from a Group 1 emission point that is uncontrolled or is controlled to a level less stringent than the reference control technology, and the emissions allowed for the Group 1 emission point. Debits shall be calculated as follows:

(1) The overall equation for calculating source-wide debits is:

$$\text{Debits} = \sum_{i=1}^{n}\left(\text{EWWiACTUAL} - \text{EWWic}\right)$$

Where:

Debits and all terms of the equation are in units of megagrams per month, and

EWWiACTUAL = Emissions from each Group 1 wastewater stream i that is uncontrolled or is controlled to a level less stringent than the reference control technology. This is calculated according to 40 CFR 63.150(g)(5).

EWWic = Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. This is calculated according to 40 CFR 63.150(g)(5).

n = The number of emission points being included in the emissions average. The value of n is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

(2) Emissions from process vents shall be calculated according to 40 CFR 63.150(g)(2)(i) through 63.150(g)(2)(iii).

(i) The location of a process vent shall be defined, and the characteristics of its gas stream shall be determined at a point that meets the conditions in either 40 CFR 63.150(g)(2)(i)(A) or 63.150(g)(2)(i)(B) and the conditions in paragraphs 63.150(g)(2)(i)(C) through 63.150(g)(2)(i)(E).

(A) The point is after the final recovery device (if any recovery devices are present).

(B) If a gas stream included in an emissions average is combined with one or more other gas streams after a final recovery device (if any recovery devices are present), then for each gas stream, the point is at a representative point after any final recovery device and as near as feasible to, but before, the point of combination of the gas streams.

(C) The point is before any control device (for process vents, recovery devices shall not be considered control devices).

(D) The point is before discharge to the atmosphere.

(E) The measurement site for determination of the characteristics of the gas stream was selected using Method 1 or 1A of 40 CFR Part 60, Appendix A.

(ii) The following equation shall be used for each process vent i to calculate EPViu:

$$EPV_{iu} = (2.494 \times 10^{-9})\, Qh \left(\sum_{j=1}^{n} C_j M_j \right)$$

where:

EPViu = Uncontrolled process vent emission rate from process vent i, megagrams per month.

Q = Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D of 40 CFR Part 60, Appendix A, as appropriate.

h = Monthly hours of operation during which positive flow is present in the vent, hours per month.

Cj = Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18 of 40 CFR Part 60, Appendix A.

Mj = Molecular weight of organic HAP j, gram per gram-mole.

n = Number of organic HAP's.

(A) The values of Q, Cj, and Mj shall be determined during a performance test conducted under representative operating conditions. The values of Q, Cj, and Mj shall be established in the Notification of Compliance Status and must be updated as provided in 40 CFR 63.150(g)(2)(ii)(B).

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or product recovery equipment or operation such that the previously measured values of Q, Cj, and Mj are no longer representative, a new performance test shall be conducted to determine new representative values of Q, Cj, and Mj. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) Emissions from wastewater shall be calculated as follows:

(i) The following equation shall be used for each wastewater stream i to calculate EWWic:

$$EWW_{ic} = \left(6.0 * 10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left(1 - Fr_m\right) Fe_m HAP_{im}$$
$$+ (0.05)\left(6.0 * 10^{-8}\right) Q_i H_i \sum_{m=1}^{s} \left(Fr_m HAP_m\right)$$

where:

EWWic = Monthly wastewater stream emission rate if wastewater stream i is controlled by the reference control technology, megagrams per month.

Qi = Average flow rate for wastewater stream i, as determined by the procedure in 40 CFR 63.144(c)(3), liters per minute.

Hi = Number of hours during the month that wastewater stream i was generated, hours per month.

s = Total number of Table 9 HAP in wastewater stream i [Table found in 40 CFR Part 63, Subpart G].

Frm = Fraction removed of Table 9 HAP m in wastewater, from Table 9, dimensionless [Table found in 40 CFR Part 63, Subpart G].

Fem = Fraction emitted of Table 9 HAP m in wastewater, from Table 34, dimensionless [Tables found in 40 CFR Part 63, Subpart G].

HAPim = Average concentration of Table 9 HAP m in wastewater stream i, parts per million by weight [Table found in 40 CFR Part 63, Subpart G].

(A) HAPim shall be determined for the point of determination or, at a location downstream of the point of determination and adjusted according as specified in 40 CFR 63.144(b)(6), by developing and using the sampling plan specified in 63.144(b)(5)(ii). The samples collected may be analyzed by any of the methods specified in 40 CFR 63.144(b)(5)(i)(B) through 63.144(b)(5)(i)(F). Concentration measurements based on Method 305 shall be adjusted by dividing each concentration by the compound-specific Fm factor listed on Table 34 of 40 CFR Part 63, Subpart G. Concentration measurements other than Method 305 shall not be adjusted by the compound-specific Fm factor listed in Table 34 of 40 CFR Part 63, Subpart G.

(B) [Reserved]

(C) If there is a change to the process or operation such that the previously measured values of Qi, HAPim, and Cim are no longer representative, a new performance test shall be conducted to determine new representative values of Qi, HAPim, and Cim. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(ii) The following equation shall be used to calculate EWWiACTUAL for each wastewater stream i that is not managed according to the provisions for waste management units of 40 CFR 63.133 through 63.137, as applicable, which specify equipment and work practices for suppressing and controlling vapors. Qi, Hi, s, Fem, and HAPim are as defined and determined according to 40 CFR 63.150(g)(5)(i).

$$EWW_{iactual} = \left(6.0 \times 10^{-8}\right) Q_i H_i \sum_{m=1}^{s} Fe_m HAP_{im}$$

where:

EWWiACTUAL = Monthly wastewater stream emission rate if wastewater stream i is uncontrolled or is controlled to a level less stringent than the reference control technology, megagrams per month.

(iii) [Reserved]

(h) Pursuant to 40 CFR 63.150(h), credits are generated by the difference between emissions that are allowed for each Group 1 and Group 2 emission point and the actual emissions from a Group 1 or Group 2 emission point that has been controlled after November 15, 1990 to a level more stringent than what is required by 40 CFR Part 63, Subpart G or any other State or Federal rule or statute. Credits shall be calculated as follows:

(1) The overall equation for calculating source-wide credits is:

$$\text{Credits} = D \sum_{i=1}^{m} \left(\text{EPV2}_{\text{iBase}} - \text{EPV2}_{\text{iActual}} \right)$$

where:

Credits and all terms of the equation are in units of megagrams per month, the baseline date is November 15, 1990, and:

D = Discount factor = 0.9 for all credit generating emission points.

EPV2iACTUAL = Emissions from each Group 2 process vent i that is controlled, calculated according to 40 CFR 63.150(h)(2).

EPV2iBASE = Emissions from each Group 2 process vent i at the baseline date, as calculated in 40 CFR 63.150(h)(2).

m = Number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for process vents, storage vessels, transfer racks, and wastewater.

(i) For an emission point controlled using a reference control technology, the percent reduction for calculating credits shall be no greater than the nominal efficiency associated with the reference control technology, unless a higher nominal efficiency is assigned as specified in 40 CFR 63.150(h)(1)(ii).

(ii) [Reserved]

(iii) [Reserved]

(2) Emissions from process vents shall be determined as follows:

(i) [Reserved]

(ii) [Reserved]

(iii) The following procedures shall be used to calculate actual emissions, EPV2iACTUAL:

(A) For a Group 2 process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, if the control achieves a percent reduction less than or equal to 98 percent reduction,

$$EPV2_{iACTUAL} = EPV2_{iu} \times \left(1 - \frac{Percent\ \text{reduction}}{100\%} \right)$$

(1) EPV2iu shall be calculated according to the equations and procedures for EPViu in 40 CFR 63.150(g)(2)(i) and 63.150(g)(2)(ii).

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(B) [Reserved]

(iv) Emissions from Group 2 process vents at baseline, EPV2iBASE, shall be calculated as follows:

(A) If the process vent was uncontrolled on November 15, 1990, EPV2iBASE = EPV2iu and shall be calculated according to the

procedures and equation for EPViu in 40 CFR 63.150(g)(2)(i) and 63.150(g)(2)(ii).

(B) [Reserved]

(C) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(i) [Reserved]

(j) [Reserved]

(k) [Applicable under BB.5]

(l) [Reserved]

(m) [Applicable under BB.5]

(n) [Applicable under BB.15]

(o) [Applicable under BB.15]

Recordkeeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

BB.10 Process Vent Provisions - Methods and Procedures for Process Vent Group Determination. [326 IAC 20-11] [40 CFR 63.115, Subpart G]

(a) [Applicable under BB.6]

(b) [Applicable under BB.6]

(c) [Reserved]

(d) [Applicable under BB.6]

(e) Pursuant to 40 CFR 63.115(e), the Permittee of a Group 2 process vent shall recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine whether the vent is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the vent to a Group 1 vent. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of 40 CFR 63.115(e), process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original TRE calculation was based.

(1) [Applicable under BB.6]

(2) Where the recalculated TRE index value is less than or equal to 1.0, or less than or equal to 4.0 but greater than 1.0, the recalculated flow rate is greater than or equal to 0.005 standard cubic meter per minute, or the recalculated concentration is greater than or equal to 50 parts per million by volume, the Permittee shall submit a report as specified in 40 CFR 63.118(g), 63.118(h), 63.118(i), or 63.118(j) and shall comply with the appropriate provisions in 40 CFR 63.113 and by the dates specified in 40 CFR 63.100 of Subpart F.

(f) [Reserved]

BB.11 Process Vent Provisions, Requirements for Group and TRE Determinations and Performance tests. [326 IAC 12] [40 CFR 63.117, Subpart G]

(a) Pursuant to 40 CFR 63.117(a), each Permittee subject to the control provisions for Group 1 process vents in 40 CFR 63.113(a) or the provisions for Group 2 process vents with a TRE index value greater than 1.0 but less than or equal to 4.0 in 40 CFR 63.113(d) shall:

(1) Keep an up-to-date, readily accessible record of the data specified in 40 CFR 63.117(a)(4) through 63.117(a)(8), as applicable, and

(2) Include the data specified in 40 CFR 63.117(a)(4) through 63.117(a)(8) in the Notification of Compliance Status report as specified in 40 CFR 63.152(b).

(3) If any subsequent TRE determinations or performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in 40 CFR 63.117(a)(4) through 63.117(a)(8) in the next Periodic Report as specified in 40 CFR 63.152(c).

(4) Record and report the following when using a combustion device to achieve a 98 weight percent reduction in organic HAP or an organic HAP concentration of 20 parts per million by volume, as specified in 40 CFR 63.113(a)(2):

(i) The parameter monitoring results for incinerators, catalytic incinerators, boilers or process heaters specified in Table 3 of 40 CFR Part 63, Subpart G, and averaged over the same time period of the performance testing.

(ii) For an incinerator, the percent reduction of organic HAP or TOC achieved by the incinerator determined as specified in 40 CFR 63.116(c), or the concentration of organic HAP or TOC (parts per million by volume, by compound) determined as specified in 40 CFR 63.116(c) at the outlet of the incinerator on a dry basis corrected to 3 percent oxygen.

(iii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater.

(iv) [Reserved]

(5) [Reserved]

(6) [Reserved]

(7) Record and report the following when achieving and maintaining a TRE index value greater than 1.0 but less than 4.0 as specified in 40 CFR 63.113(a)(3) or 63.113(d):

(i) The parameter monitoring results for absorbers, condensers, or carbon adsorbers, as specified in Table 4 of 40 CFR Part 63, Subpart G, and averaged over the same time period of the measurements of vent stream flow rate and concentration used in the TRE determination (both measured while the vent stream is normally routed and constituted), and

(ii) The measurements and calculations performed to determine the TRE index value of the vent stream.

(8) [Reserved]

(b) Pursuant to 40 CFR 63.117(b), the Permittee of a Group 2 process vent with a TRE index greater than 4.0 as specified in 40 CFR 63.113(e), shall maintain records and submit as part of the Notification of Compliance Status specified in 40 CFR 63.152, measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream. Documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments, as specified in 40 CFR 63.115(d)(1).

(c) Pursuant to 40 CFR 63.117(c), the Permittee who elects to demonstrate that a process vent is a Group 2 process vent based on a flow rate less than 0.005 standard cubic meter per minute must submit to IDEM, OAQ the flow rate measurement using methods and procedures specified in 40 CFR 63.115(a) and 63.115(b) with the Notification of Compliance Status specified in 40 CFR 63.152.

(d) [Reserved]

(e) [Reserved]

(f) Pursuant to 40 CFR 63.117(f), for each parameter monitored according to Tables 3 or 4 of 40 CFR Part 63, Subpart G, the Permittee shall establish a range for the parameter that indicates proper operation of the control or recovery device. In order to establish the range, the information required in 40 CFR 63.152(b) shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.

BB.12 Process Vent Provisions - Periodic Reporting and Recordkeeping Requirements. [326 IAC 12] [40 CFR 63.118, Subpart G]

(a) Pursuant to 40 CFR 63.118(a), each Permittee using a control device to comply with 40 63.113(a)(2) shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.114(a) and listed in Table 3 of 40 CFR Part 63, Subpart G.

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.152(f).

(3) Hourly records of whether the flow indicator specified under 40 CFR 63.114(d)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the gas stream is diverted to the atmosphere or the monitor is not operating.

(4) Where a seal mechanism is used to comply with 40 CFR 63.114(d)(2), hourly records of flow are not required. In such cases, the Permittee shall record that the monthly visual inspection of the seals or closure mechanism has been done, and shall record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

(b) Pursuant to 40 CFR 63.118(b), each Permittee using a recovery device or other means to achieve and maintain a TRE index value greater than 1.0 but less than 4.0 as specified in 40 CFR 63.113(d) shall keep the following records up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.114(b) and listed in Table 4 of 40 CFR Part 63, Subpart G and

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.152(f). If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in Table 4 of 40 CFR Part 63, Subpart G shall be kept instead of the daily averages.

(c) Pursuant to 40 CFR 63.118(c), each Permittee subject to the provisions of Subpart G and who elects to demonstrate compliance with the TRE index value greater than 1.0 under 40 CFR 63.113(d) shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in 40 CFR 63.115(e); and

(2) Any recalculation of the TRE index value pursuant to 40 CFR 63.115(e).

(d) Pursuant to 40 CFR 63.118(d), each Permittee who elects to comply by maintaining a flow rate less than 0.005 standard cubic meter per minute under 40 CFR 63.113(f), shall keep up-to-date, readily accessible records of:

(1) Any process changes as defined in 40 CFR 63.115(e) that increase the vent stream flow rate,

(2) Any recalculation or measurement of the flow rate pursuant to 40 CFR 63.115(e), and

(3) If the flow rate increases to 0.005 standard cubic meter per minute or greater as a result of the process change, the TRE determination performed according to the procedures of 40 CFR 63.115(d).

(e) [Reserved]

(f) Pursuant to 40 CFR 63.118(f), each Permittee who elects to comply with the requirements of 40 CFR 63.113 shall submit to IDEM, OAQ Periodic Reports of the following recorded information according to the schedule in 40 CFR 63.152.

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values recorded under 40 CFR 63.118(a) and 63.118(b) were outside the ranges established in the Notification of Compliance Status or operating permit.

(2) For Group 1 points, reports of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data as defined in 40 CFR 63.152(c)(2)(ii)(A).

(3) Reports of the times and durations of all periods recorded under 40 CFR 63.118(a)(3) when the gas stream is diverted to the atmosphere through a bypass line.

(4) Reports of all periods recorded under 40 CFR 63.118(a)(4) in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out.

(5) [Reserved]

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under 40 CFR 63.118(b)(2)(v) were outside the ranges established in the Notification of Compliance Status or operating permit.

(g) Pursuant to 40 CFR 63.118(g), whenever a process change, as defined in 40 CFR 63.115(e), is made that causes a Group 2 process vent to become a Group 1 process vent, the Permittee shall submit a report within 180 calendar days after the process change as specified in 40 CFR 63.151(j). The report shall include:

(1) A description of the process change;

(2) The results of the recalculation of the flow rate, organic HAP concentration, and TRE index value required under 40 CFR 63.115(e) and recorded under 40 CFR 63.118(c) or 63.118(d); and

(3) A statement that the Permittee will comply with the provisions of 40 CFR 63.113 for Group 1 process vents by the dates specified in 40 CFR Part 63, Subpart F.

(h) Pursuant to 40 CFR 63.118(h), whenever a process change, as defined in 40 CFR 63.115(e), is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0, the Permittee shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the TRE index value required under 40 CFR 63.115(e) and recorded under 40 CFR 63.118(c), and

(3) A statement that the Permittee will comply with the requirements specified in 40 CFR 63.113(d).

(i) Pursuant to 40 CFR 63.118(i), whenever a process change, as defined in 40 CFR 63.115(e), is made that causes a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute to become a Group 2 process vent with a flow rate of 0.005 standard cubic meter per minute or greater and a TRE index value less than or equal to 4.0, the Permittee shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the flow rate and the TRE determination required under 40 CFR 63.115(e) and recorded under 40 CFR 63.118(d), and

(3) A statement that the Permittee will comply with the requirements specified in 40 CFR 63.113(d).

(j) Pursuant to 40 CFR 63.118(j), whenever a process change, as defined in 40 CFR 63.115(e), is made that causes a Group 2 process vent with an organic HAP concentration less than 50 parts per million by volume to become a Group 2 process vent with an organic HAP concentration of 50 parts per million by volume or greater and a TRE index value less than or equal to 4.0, the Permittee shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include:

(1) A description of the process change,

(2) The results of the recalculation of the organic HAP concentration and the TRE determination required under 40 CFR 63.115(e) and recorded under 40 CFR 63.118(e), and

(3) A statement that the Permittee will comply with the requirements specified in 40 CFR 63.113(d).

(k) Pursuant to 40 CFR 63.118(k), the Permittee is not required to submit a report of a process change if one of the conditions listed in 40 CFR 63.118(k)(1), 63.118(k)(2), 63.118(k)(3), or 63.118(k)(4) is met.

(1) The process change does not meet the definition of a process change in 40 CFR 63.115(e), or

(2) The vent stream flow rate is recalculated according to 40 CFR 63.115(e) and the recalculated value is less than 0.005 standard cubic meter per minute, or

(3) The organic HAP concentration of the vent stream is recalculated according to 40 CFR 63.115(e) and the recalculated value is less than 50 parts per million by volume, or

(4) The TRE index value is recalculated according to 40 CFR 63.115(e) and the recalculated value is greater than 4.0.

BB.13 Process Wastewater Provisions - Reporting. [326 IAC 12] [40 CFR 63.146, Subpart G]

(a) [Reserved]

(b) Pursuant to 40 CFR 63.146(b), the Permittee shall submit the information specified in 40 CFR 63.146(b)(1) through 63.146(b)(2) as part of the Notification of Compliance Status required by 40 CFR 63.152(b).

(1) Requirements for Group 2 wastewater streams. For Group 2 wastewater streams, the Permittee shall include the information specified in 40 CFR 63.146(b)(1)(i) through 63.146(b)(1)(iv) in the Notification of Compliance Status Report. This information may be submitted in any form. Table 15 of 40 CFR Part 63, Subpart G is an example.

(i) Process unit identification and description of the process unit.

(ii) Stream identification code.

(iii) For existing sources, concentration of Table 9 compound(s) [Table found in 40 CFR Part 63, Subpart G] in parts per million, by weight. For new sources, concentration of Table 8 and/or Table 9 [both Tables found in 40 CFR Part 63, Subpart G] compound(s) in parts per million, by weight. Include documentation of the methodology used to determine concentration.

(iv) Flow rate in liter per minute.

(2) For each new and existing source, the Permittee shall submit the information specified in Table 15 for Table 8 and/or Table 9 compounds [all Tables found in 40 CFR Part 63, Subpart G].

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(6) [Reserved]

(7) [Reserved]

(8) [Reserved]

(9) [Reserved]

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

B.14 Process Wastewater Provisions - Recordkeeping. [326 IAC 12] [40 CFR 63.147, Subpart G]

(a) [Reserved]

(b) Pursuant to 40 CFR 63.147(b), the Permittee shall keep in a readily accessible location the records specified in 40 CFR 63.147(b)(1) through 63.147(8).

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(6) [Reserved]

(7) [Reserved]

(8) Requirements for Group 2 wastewater streams. The Permittee shall keep in a readily accessible location the records specified in 40 CFR 63.147(b)(8)(i) through 63.147(b)(8)(iv) for all other Group 2 wastewater streams.

(i) Process unit identification and description of the process unit.

(ii) Stream identification code.

(iii) For existing sources, concentration of Table 9 compound(s) [Table found in 40 CFR Part 63, Subpart G] in parts per million, by weight. For new sources, concentration of Table 8 and/or Table 9 compound(s) [both Tables found in 40 CFR Part 63, Subpart G] in parts per million, by weight. Include documentation of the methodology used to determine concentration.

(iv) Flow rate in liter per minute.

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) Pursuant to 40 CFR 63.147(f), if the Permittee uses process knowledge to determine the annual average concentration of a wastewater stream as specified in 40 CFR 63.144(b)(3) and/or uses process knowledge to determine the annual average flow rate as specified in 40 CFR 63.144(c)(1),

and determines that the wastewater stream is not a Group 1 wastewater stream, the Permittee shall keep in a readily accessible location the documentation of how process knowledge was used to determine the annual average concentration and/or the annual average flow rate of the wastewater stream.

BB.15 Emissions Averaging Provisions. [326 IAC 20-11] [40 CFR 63.150, Subpart G]

(a) [Applicable under BB.5]

(b) [Reserved]

(c) [Applicable under BB.5]

(d) [Reserved]

(e) Pursuant to 40 CFR 63.150(e), for all points included in an emissions average, the Permittee shall:

(1) Calculate and record monthly debits for all Group 1 emission points that are controlled to a level less stringent than the reference control technology for those emission points. Equations in 40 CFR 63.150(g) shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 or Group 2 emission points that are over controlled to compensate for the debits. Equations in 40 CFR 63.150(h) shall be used to calculate credits. Emission points and controls that meet the criteria of 40 CFR 63.150(c) may be included in the credit calculation, whereas those described 40 CFR 63.150(d) shall not be included.

(3) Demonstrate that annual credits calculated according to 40 CFR 63.150(h) are greater than or equal to debits calculated for the same annual compliance period according to 40 CFR 63.150(g).

(i) The Permittee may choose to include more than the required number of credit-generating emission points in an average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Implementation Plan or operating permit application that credit-generating emission points will be capable of generating sufficient credits to offset the debits from the debit-generating emission points must be made under representative operating conditions. After the compliance date, actual operating data will be used for all debit and credit calculations.

(4) Demonstrate that debits calculated for a quarterly (3-month) period according to 40 CFR 63.150(g) are not more than 1.30 times the credits for the same period calculated according to 40 CFR 63.150(h). Compliance for the quarter shall be determined based on the ratio of credits and debits from that quarter, with 30 percent more debits than credits allowed on a quarterly basis.

(5) Record and report quarterly and annual credits and debits in the Periodic Reports as specified in 40 CFR 63.152(c). Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by 40 CFR 63.152(c)(5)(iv)(B).

(f) [Applicable under BB.9]

(g) [Applicable under BB.9]

(h) [Applicable under BB.9]

(i) [Reserved]

(j) [Reserved]

(k) [Applicable under BB.5]

(l) [Reserved]

(m) [Applicable under BB.5]

(n) Pursuant to 40 CFR 63.150(n), records of all information required to calculate emission debits and credits shall be retained for five years.

(o) Pursuant to 40 CFR 63.150(o), Initial Notifications, Implementation Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by 40 CFR 63.151 and 63.152.

BB.16 General Reporting and Continuous Records. [326 IAC 12] [40 CFR 63.151, Subpart G]

(a) Pursuant to 40 CFR 63.151(a), the Permittee of a source subject to 40 CFR Part 63, Subpart G shall submit the reports listed in 40 CFR 63.152(a)(1) through 63.152(a)(5).

(1) [Reserved]

(2) [Reserved]

(3) A Notification of Compliance Status described in 40 CFR 63.152(b).

(4) Periodic Reports described in 40 CFR 63.152(c).

(5) Other reports described in 40 CFR 63.152(d) and 63.152(e).

(6) [Reserved]

(7) [Reserved]

(b) [Reserved]

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) Pursuant to 40 CFR 63.151(f), the Permittee who has been directed by any section of 40 CFR 63, Subpart G that expressly references 40 CFR 63.151(f) to set unique monitoring parameters or who requests approval to monitor a different parameter than those listed in 40 CFR 63.114 for process vents, 40 CFR 63.127 for transfer, or 40 CFR 63.143 for process wastewater of this subpart shall submit the information specified in 40 CFR 63.151(f)(1), (f)(2), and (f)(3) with the operating permit application or as otherwise specified by the permitting authority.

(1) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s).

(2) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in 40 CFR 63.152(b), unless this information has already been included in the operating permit application.

(3) The frequency and content of monitoring, recording, and reporting if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter value is outside the range established in the operating permit or Notification of Compliance Status will not be included in Periodic Reports required under 40 CFR 63.152(c). The rationale for the proposed monitoring, recording, and reporting system shall be included.

(g) Pursuant to 40 CFR 63.151(g), the Permittee may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in 40 CFR 63.114, 63.117, and 63.118 for process vents, 40 CFR 63.127, 63.129, and 63.130 for transfer operations, and 40 CFR 63.143, 63.146, and 63.147 for wastewater.

(1) Requests shall be included in the operating permit application or as otherwise specified by the permitting authority and shall contain the information specified in paragraphs 40 CFR 63.151(g)(3) through (g)(5), as applicable.

(2) The provisions in 40 CFR 63.8(f)(5)(i) of subpart A shall govern the review and approval of requests.

(3) The Permittee of a source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and generating continuous records may request approval to use a non-automated system with less frequent monitoring.

(i) The requested system shall include manual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily average values shall be calculated from these hourly values and recorded.

(ii) The request shall contain:

(A) A description of the planned monitoring and recordkeeping system;

(B) Documentation that the source does not have an automated monitoring and recording system;

(C) Justification for requesting an alternative monitoring and recordkeeping system; and

(D) Demonstration to IDEM/OAQ satisfaction that the proposed monitoring frequency is sufficient to represent control device operating conditions considering typical variability of the specific process and control device operating parameter being monitored.

(4) The Permittee may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example once every 15 minutes) but records all values that meet set criteria for variation from previously recorded values.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes.

(B) Record at least four values each hour during periods of operation.

(C) Record the date and time when monitors are turned off or on.

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident.

(E) Compute daily average values of the monitored operating parameter based on recorded data.

(F) If the daily average is not an excursion, as defined in 40 CFR 63.152(c)(2)(ii), the data for that operating day may be converted to hourly average values and the four or more individual records for each hour in the operating day may be discarded.

(ii) The request shall contain a description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria in 40 CFR 63.151(g)(4)(i).

(5) The Permittee may request approval to use other alternative monitoring systems according to the procedures specified in 40 CFR 63.8(f) of subpart A.

(h) The Permittee required to prepare an Implementation Plan, or otherwise required to submit a report, under 40 CFR 63.151(c), (d), or (e) shall also submit a supplement for any additional alternative controls or operating scenarios that may be used to achieve compliance.

(i) The Permittee of a source required to submit an Implementation Plan for emissions averaging under 40 CFR 63.151(c) and (d) shall also submit written updates of the Implementation Plan to IDEM/OAQ for approval under the circumstances described in 40 CFR 63.151(i)(1) and (i)(2) unless the relevant information has been included and submitted in an operating permit application or amendment.

(1) The Permittee who plans to make a change listed in 40 CFR 63.151(i)(1)(i) or 63.151(i)(1)(ii) shall submit an Implementation Plan update at least 120 calendar days prior to making the change.

(i) Whenever the Permittee elects to achieve compliance with the emissions averaging provisions in 40 CFR 63.150 by using a control technique other than that specified in the Implementation Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Implementation Plan.

(ii) Whenever an emission point or a chemical manufacturing process unit is added to an existing source and is planned to be included in an emissions average, or whenever an emission point not included in the emissions average described in the Implementation Plan is to be added to an emissions average. The information in 40 CFR 63.151(d) shall be updated to include the additional emission point.

(2) The Permittee who has made a change listed in 40 CFR 63.151(i)(2)(i) or 63.151(i)(2)(ii) shall submit an Implementation Plan update within 90 calendar days after the information regarding the change is known to the source. The update may be submitted in the next quarterly Periodic Report if the change is made after the date the Notification of Compliance status is due.

(i) Whenever a process change is made such that the group status of any emission point in an emissions average changes.

(ii) Whenever a value of a parameter in the emission credit or debit equations in 40 CFR 63.150(g) or (h) changes such that it is outside the range specified in the Implementation Plan and causes a decrease in the projected credits or an increase in the projected debits.

(3) IDEM/OAQ shall approve or request changes to the Implementation Plan update within 120 calendar days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(j) The Permittee of a source, for emission points that are not included in an emissions average, shall report to IDEM/OAQ under the circumstances described in 40 CFR 63.151(j)(1), (j)(2), and (j)(3) unless the relevant information has been included and submitted in an operating permit application or amendment, or as otherwise specified by the permitting authority. The information shall be submitted within 180 calendar days after the change is made or the information regarding the change is known to the source. The update may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status is due.

(1) Whenever a deliberate change is made such that the group status of any emission point changes. The information submitted shall include a compliance schedule as specified in 40 CFR 63.100 if the emission point becomes Group 1.

(2) Whenever the Permittee elects to achieve compliance with 40 CFR 63, Subpart G by using a control technique other than that previously reported to IDEM/OAQ or to the permitting authority, or plans to monitor a different parameter, or operate a control device in a manner other than that previously reported.

(3) Whenever an emission point or a chemical manufacturing process unit is added to a source, written information specified under 40 CFR 63.151(e)(1) through (e)(5), containing information on the new emission point(s) shall be submitted to the EPA regional office where the source is located.

BB.17 General Reporting and Continuous Records. [326 IAC 12] [63.152, Subpart G]

(a) Pursuant to 40 CFR 63.152(a), the Permittee of a source subject to 40 CFR Part 63, Subpart G shall submit the reports listed in 40 CFR 63.152(a)(1) through 63.152(a)(5) and keep continuous records of monitored parameters as specified in 40 CFR 63.152(f). The Permittee requesting an extension of compliance shall also submit the report described in 40 CFR 63.151(a)(6).

(1) [Reserved]

(2) [Reserved]

(3) A Notification of Compliance Status described in 40 CFR 63.152(b).

(4) Periodic Reports described in 40 CFR 63.152(c).

(5) Other reports described in 40 CFR 63.152(d) and 63.152(e).

(b) Pursuant to 40 CFR 63.152(b), the Permittee submitted a Notification of Compliance Status on September 12, 1997.

(1) The notification shall include the results of any emission point group determinations, performance tests, inspections, continuous monitoring system performance evaluations, values of monitored parameters established during performance tests, and any other information used to demonstrate compliance or required to be included in the Notification of Compliance Status under 40 CFR 63.110(h) for regulatory overlaps, under 40 CFR 63.117 for process vents, 40 CFR 63.122 for storage vessels, 40 CFR 63.129 for transfer operations, 40 CFR 63.146 for process wastewater, and 40 CFR 63.150 for emission points included in an emissions average.

(i) For performance tests and group determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report for each test method used for a particular kind of emission point. For additional tests performed for the same kind of emission point using the same method, the results and any other information required in 40 CFR 63.117 for process vents, and 40 CFR 63.146 for process wastewater shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(2) For each monitored parameter for which a range is required to be established under 40 CFR 63.114 for process vents, 40 CFR 63.150(m) for emission points in emissions averages, or 40 CFR 63.151(f), or 40 CFR 63.152(e), the Notification of Compliance Status shall include the information in 40 CFR 63.152(b)(2)(i), 63.152(b)(2)(ii), and 63.152(b)(2)(iii) unless the range and the operating day definition have been established in the operating permit.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control device.

(A) If a performance test is required by 40 CFR Part 63, Subpart G for a control device, the range shall be based on the parameter values measured during the performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test is not required by 40 CFR Part 63, Subpart G for a control device, the range may be based solely on engineering assessments and/or manufacturer's recommendations.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(3) For emission points included in an emissions average, the Notification of Compliance Status shall include the values of all parameters needed for input to the emission credit and debit equations in 40 CFR 63.150(g) and 63.150(h), calculated or measured according to the procedures in 40 CFR 63.150(g) and 63.150(h), and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified in 40 CFR 63.100 of Subpart F.

(4) If any emission point is subject to 40 CFR Part 63, Subpart G and to other standards as specified in 40 CFR 63.110 and if the provisions of 40 CFR 63.110 allow the Permittee to choose which testing, monitoring, reporting, and recordkeeping provisions will be followed, then the Notification of Compliance Status shall indicate which rule's requirements will be followed for testing, monitoring, reporting, and recordkeeping.

(5) [Reserved]

(6) [Reserved]

(c) Pursuant to 40 CFR 63.152(c), the Permittee of a source subject to 40 CFR Part 63, Subpart G shall submit Periodic Reports.

(1) Except as specified under 40 CFR 63.152(c)(5) and 63.152(c)(6), a report containing the information in 40 CFR 63.152(c)(2), 62.152(c)(3), and 63.152(c)(4) shall be submitted semiannually no later than 60 calendar days after the end of each 6-month period.

(2) Except as provided in 40 CFR 63.152(c)(2)(iv), for a Permittee of a source complying with the provisions of 40 CFR 63.113 through 63.147 for any emission points, Periodic Reports shall include all information specified in 40 CFR 63.117 and 63.118 for process vents, and 40 CFR 63.146 for process wastewater, including reports of periods when monitored parameters are outside their established ranges.

(i) For each parameter or parameters required to be monitored for a control device, the Permittee shall establish a range of parameter values to ensure that the device is being applied, operated and maintained properly. As specified in 40 CFR 63.152(b)(2), these parameter values and the definition of an operating day shall be approved as part of and incorporated into the source's Notification of Compliance Status or operating permit, as appropriate.

(ii) The parameter monitoring data for Group 1 emission points and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance with the required operating conditions for the monitored control devices or recovery devices. For each excursion, except for excused excursions, the Permittee shall be deemed to have failed to have applied the control in a manner that achieves the required operating conditions.

(A) An excursion means any of the three cases listed in 40 CFR 63.152(c)(2)(ii)(A)(1), 63.152(c)(2)(ii)(A)(2), or 63.152(c)(2)(ii)(A)(3). For a control device or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in 40 CFR 63.152(c)(2)(ii)(A)(1), 63.152(c)(2)(ii)(A)(2), or 63.152(c)(2)(ii)(A)(3), this is considered a single excursion for the control device or recovery device.

(1) When the daily average value of one or more monitored parameters is outside the permitted range.

(2) When the period of control device or recovery device operation is 4 hours or greater in an operating day and monitoring data

are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(3) When the period of control device or recovery device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(4) Monitoring data are insufficient to constitute a valid hour of data, as used in 40 CFR 63.152(c)(2)(ii)(A)(2) and 63.152(c)(2)(ii)(A)(3), if measured values are unavailable for any of the 15-minute periods within the hour.

(B) The number of excused excursions for each control device or recovery device for each semiannual period is specified in 40 CFR 63.152(c)(2)(ii)(B)(1) through 63.152(c)(2)(ii)(B)(6). 40 CFR 63.152(c)(2)(ii)(B) applies to sources required to submit Periodic Reports semiannually or quarterly.

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) [Reserved]

(6) For the sixth and all subsequent semiannual periods - one excused excursion.

(C) A monitored parameter that is outside its established range or monitoring data that are not collected are excursions. However, if the conditions in 40 CFR 63.152(c)(2)(ii)(C)(1) or 63.152(c)(2)(ii)(C)(2) are met, these excursions are not violations and do not count toward the number of excused excursions for determining compliance.

(1) Periods of start-up, shutdown, or malfunction. During periods of start-up, shutdown, or malfunction when the source is operated during such periods in accordance with the source's start-up, shutdown, and malfunction plan as required by 40 CFR 63.6(e)(3) of Subpart A.

(2) Periods of nonoperation. During periods of nonoperation of the chemical manufacturing process unit, or portion thereof, that results in cessation of the emissions to which the monitoring applies.

(D) Nothing in 40 CFR 63.152(c)(2)(ii) shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of 40 CFR Part 63, Subpart A, F, or G.

(E) Paragraph 40 CFR 63.152(c)(2)(ii), except 63.152(c)(2)(ii)(C), shall apply only to emission points and control devices or recovery devices for which continuous monitoring is required by 40 CFR 63.113 through 63.150.

(iii) Periodic Reports shall include the daily average values of monitored parameters for both excused and unexcused excursions, as defined in 40 CFR 63.152(c)(2)(ii)(A). For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified.

(iv) The provisions of 40 CFR 63.152(c)(2), 63.152(c)(2)(i), 63.152(c)(2)(ii), and 63.152(c)(2)(iii) do not apply to any storage vessel. If continuous records are required, the Permittee shall specify, in the monitoring plan, whether the

provisions of 40 CFR 63.152(c)(2), 63.152(c)(2)(i), 63.152(c)(2)(ii), and 63.152(c)(2)(iii) apply.

(3) If any performance tests are reported in a Periodic Report, the following information shall be included:

(i) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in 40 CFR 63.152(b)(1)(ii).

(ii) For additional tests performed for the same kind of emission point using the same method, results and any other information required in 40 CFR 63.117 for process vents, and 40 CFR 63.146 for process wastewater shall be submitted, but a complete test report is not required.

(4) Periodic Reports shall include the information in 40 CFR 63.152(c)(4)(i) through 63.152(c)(4)(iv), as applicable:

(i) For process vents, reports of process changes as required under 40 CFR 63.118(g), 63.118(h), 63.118(i), and 63.118(j).

(ii) Any supplements required under 40 CFR 63.151(i) and 63.151(j),

(iii) Notification if any Group 2 emission point becomes a Group 1 emission point, including a compliance schedule as required in 40 CFR 63.100 of Subpart F, and

(iv) [Reserved]

(5) The Permittee of a source shall submit quarterly reports for all emission points included in an emissions average.

(i) The quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 5 months after the compliance date specified in 40 CFR 63.100 of Subpart F.

(ii) The quarterly reports shall include the information specified in 40 CFR 63.152(c)(5)(ii) for all emission points included in an emissions average.

(A) The credits and debits calculated each month during the quarter;

(B) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under 40 CFR 63.150(e)(4).

(C) The values of any inputs to the credit and debit equations in 40 CFR 63.150(g) and 63.150(h) of that change from month to month during the quarter or that have changed since the previous quarter;

(D) Results of any performance tests conducted during the reporting period including one complete report for each test method used for a particular kind of emission point as described in 40 CFR 63.152(c)(3);

(E) Reports of daily average values of monitored parameters for both excused and unexcused excursions as defined in 40 CFR 63.152(c)(2)(ii)(A). For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified.

(iii) Sections 40 CFR 63.152(c)(2)(i) through 63.152(c)(2)(iii) shall govern the use of monitoring data to determine compliance for Group 1 and Group 2 points included in emissions averages. For storage vessels to which the provisions of 40 CFR 63.152(c)(2)(i) through 63.152(c)(2)(iii) do not apply (as specified in 40 CFR 63.152(c)(2)(iv)), the Permittee is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

(iv) Every fourth quarterly report shall include the following:

(A) A demonstration that annual credits are greater than or equal to annual debits as required by 40 CFR 63.150(e)(3); and

(B) A certification of compliance with all the emissions averaging provisions in 40 CFR 63.150.

(6) The Permittee of a source shall submit reports quarterly for particular emission points not included in an emissions average under the circumstances described in 40 CFR 63.152(c)(6)(i) through 63.152(c)(6)(v)

(i) The Permittee of a source subject to 40 CFR Part 63, Subpart G shall submit quarterly reports for a period of one year for an emission point that is not included in an emissions average if:

(A) The emission point has more excursions, as defined in 40 CFR 63.152(c)(2)(ii), than the number of excused excursions allowed under 40 CFR 63.152(c)(2)(ii)(B) for a semiannual reporting period; and

(B) IDEM, OAQ requests the Permittee to submit quarterly reports for the emission point.

(ii) The quarterly reports shall include all information in 40 CFR 63.152(c)(2), 63.152(c)(3), and 63.152(c)(4) applicable to the emission point(s) for which quarterly reporting is required under 40 CFR 63.152(c)(6)(i). Information applicable to other emission points within the source shall be submitted in the semiannual reports required under 40 CFR 63.152(c)(1).

(iii) Quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter.

(iv) After quarterly reports have been submitted for an emission point for one year, the Permittee may return to semiannual reporting for the emission point unless IDEM, OAQ requests the Permittee to continue to submit quarterly reports.

(v) Sections 40 CFR 63.152(c)(2)(i) through 63.152(c)(2)(iii) shall govern the use of monitoring data to determine compliance for Group 1 emission points. For storage vessels to which the provisions of 40 CFR 63.152(c)(2)(i) through 63.152(c)(2)(iii) do not apply (as specified in 40 CFR 63.152(c)(2)(iv)), the Permittee is required to comply with the provisions of the applicable monitoring plan, and monitoring records may be used to determine compliance.

(d) Pursuant to 40 CFR 63.152(d), other reports shall be submitted as specified in Part 63, Subpart A or in 40 CFR 63.113 through 63.151. These reports are:

(1) Reports of start-up, shutdown, and malfunction required by 40 CFR 63.10(d)(5) of Subpart A. The start-up, shutdown and malfunction reports may be submitted on the same schedule as the Periodic Reports required under 40 CFR 63.152(c) instead of the schedule specified in 40 CFR 63.10(d)(5) of Subpart A.

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(e) Pursuant to 40 CFR 63.152(e), a Permittee subject to 40 CFR Part 63, Subpart G shall submit the information specified in 40 CFR 63.152(e)(1) through 63.152(e)(4) with the operating permit application or as otherwise specified by IDEM, OAQ. The Permittee shall submit written updates as amendments to the operating permit application on the schedule and under the circumstances described in 40 CFR 63.151(j). Notwithstanding, if the Permittee has an operating permit under 40 CFR Part 70 or 71, the Permittee shall follow the schedule and format required by IDEM, OAQ.

(1) The information specified in 40 CFR 63.151(f) or 63.151(g) for any emission points for which the Permittee requests approval to monitor a unique parameter or use an alternative monitoring and recording system, and

(2) The information specified in 40 CFR 63.151(d) for points included in an emissions average.

(3) The information specified in 40 CFR 63.151(e) for points not included in an emissions average.

(4) The information specified in 40 CFR 63.151(h) as applicable.

(f) Pursuant to 40 CFR 63.152(f), a Permittee required to keep continuous records by 40 CFR 63.118, 63.147, 63.150, or other sections of 40 CFR Part 63, Subpart G shall keep records as specified in 40 CFR 63.152(f)(1) through 63.152(f)(7), unless an alternative recordkeeping system has been requested and approved under 40 CFR 63.152(e) or under 63.8(f) of Subpart A, and except as provided in 40 CFR 63.152(c)(2)(ii)(C) or 63.152(g).

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The Permittee shall record either:

(i) Each measured data value; or

(ii) Block average values for 15-minute or shorter periods calculated from all measured data values during each period or at least one measured data value per minute if measured more frequently than once per minute.

(3) If the daily average value of a monitored parameter for a given operating day is within the range established in the Notification of Compliance Status or operating permit, the Permittee shall either:

(i) Retain block hourly average values for that operating day for 5 years and discard, at or after the end of that operating day, the 15-minute or more frequent average values and readings recorded under 40 CFR 63.152(f)(2); or

(ii) Retain the data recorded in 40 CFR 63.152(f)(2) for 5 years.

(4) If the daily average value of a monitored parameter for a given operating day is outside the range established in the Notification of Compliance Status or operating permit, the Permittee shall retain the data recorded that operating day under 40 CFR 63.152(f)(2) for 5 years.

(5) Daily average values of each continuously monitored parameter shall be calculated for each operating day, and retained for 5 years, except as specified in 40 CFR 63.152(f)(6) and 63.152(f)(7).

(i) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(ii) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(6) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or operating permit, the Permittee may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. For these operating days, the records required in 40 CFR 63.152(f)(3) shall also be retained for 5 years.

(7) Monitoring data recorded during periods identified in 40 CFR 63.152(f)(7)(i) through 63.152(f)(7)(v) shall not be included in any average computed under 40 CFR Part 63,

Subpart G. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions;

(v) Periods of non-operation of the chemical manufacturing process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(g) Pursuant to 40 CFR 63.152(g), for any parameter with respect to any item of equipment, the Permittee may implement the recordkeeping requirements in 40 CFR 63.152(g)(1) or 63.152(g)(2) as alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in 40 CFR 63.114, 63.117, and 63.118 for process vents, 63.146, and 63.147 for wastewater, and/or 40 CFR 63.152(f), except that 40 CFR 63.152(f)(7) shall apply. The Permittee shall retain each record required by 40 CFR 63.152(g)(1) or 63.152(g)(2) as provided in 40 CFR 63.103(c) of Subpart F, except as provided otherwise in 40 CFR 63.152(g)(1) or 63.152(g)(2).

(1) The Permittee may retain only the daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of 40 CFR 63.152(g)(1)(i) through 63.152(g)(1)(vi) are met. A Permittee electing to comply with the requirements of 40 CFR 63.152(g)(1) shall notify IDEM, OAQ in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the periodic report immediately preceding implementation of the requirements of 40 CFR 63.152(g)(1).

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than startups, shutdowns, or malfunctions (e.g., a temperature reading of -200℃ on a boiler), and will alert the operator by alarm or other means. The Permittee shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this average is readily available to IDEM, OAQ on-site during the operating day. The Permittee shall record the occurrence of any period meeting the criteria in 40 CFR 63.152(g)(1)(ii)(A) through 63.152(g)(1)(iii)(C). All instances in an operating day constitute a single occurrence.

(A) The running average is above the maximum or below the minimum established limits;

(B) The running average is based on at least 6 1-hour average values; and

(C) The running average reflects a period of operation other than a startup, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than startups, shutdowns, or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The Permittee shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(iv) The monitoring system will alert the Permittee by an alarm or other means, if the running average parameter value calculated under 40 CFR 63.152(g)(1)(ii) reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The Permittee shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of 40 CFR 63.152(g)(1), at the times specified in 40 CFR 63.152(g)(1)(v)(A) through 63.152(g)(1)(v)(C). The Permittee shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of 40 CFR 63.152.

(vi) The Permittee shall retain the records identified in 40 CFR 63.152(g)(1)(vi)(A) through 63.152(g)(1)(vi)(C)

(A) Identification of each parameter, for each item of equipment, for which the Permittee has elected to comply with the requirements of 40 CFR 63.152(g).

(B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of 40 CFR 63.152(g)(1)(i) through 63.152(g)(1)(v). The description shall identify the location and format (e.g., on-line storage; log entries) for each required record. If the description changes, the Permittee shall retain both the current and the most recent superseded description. The description, and the most recent superseded description, shall be retained as provided in 40 CFR 63.103(c) of Subpart F, except as provided in 40 CFR 63.152(g)(1)(vi)(D).

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of 40 CFR 63.152(g)(1).

(D) Permittees subject to 40 CFR 63.152(g)(1)(vi)(B) shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The Permittee shall retain the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after its creation. Thereafter, the superseded description may be stored off-site.

(2) If a Permittee has elected to implement the requirements of 40 CFR 63.152(g)(1) and a period of 6 consecutive months has passed without an excursion as defined in 40 CFR 63.152(g)(2)(iv), the Permittee is no longer required to record the daily average value for that parameter for that unit of equipment, for any operating day when the daily average value is less than the maximum, or greater than the minimum established limit. With approval by IDEM, OAQ, monitoring data generated prior to the compliance date of 40 CFR Part 63, Subpart G shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring was required and/or approved by IDEM, OAQ.

(i) If the Permittee elects not to retain the daily average values, the Permittee shall notify IDEM, OAQ in the next periodic report. The notification shall identify the parameter and unit of equipment.

(ii) If, on any operating day after the Permittee has ceased recording daily averages as provided in 40 CFR 63.152(g)(2), there is an excursion as defined in 40 CFR 63.152(g)(2)(iv), the Permittee shall immediately resume retaining the daily average value for each day, and shall notify IDEM, OAQ in the next periodic report. The Permittee shall continue to retain each daily average value until

another period of 6 consecutive months has passed without an excursion as defined in 40 CFR 63.152(g)(2)(iv).

(iii) The Permittee shall retain the records specified in 40 CFR 63.152(g)(1)(i), 63.152(g)(1)(ii), 63.152(g)(1)(iii), 63.152(g)(1)(iv), 63.152(g)(1)(v), and 63.152(g)(1)(vi). For any calendar week, if compliance with 40 CFR 63.152(g)(1)(i), 63.152(g)(1)(ii), 63.152(g)(1)(iii), and 63.152(g)(1)(iv) does not result in retention of a record of at least one occurrence or measured parameter value, the Permittee shall record and retain at least one parameter value during a period of operation other than a startup, shutdown, or malfunction.

(iv) For purposes of 40 CFR 63.152(g), an excursion means that the daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in 40 CFR 63.152(g)(2)(iv)(A) and 63.152(g)(2)(iv)(B).

(A) The daily average value during any start-up, shutdown, or malfunction shall not be considered an excursion for purposes of 40 CFR 63.152(g)(2), if the Permittee follows the applicable provisions of the startup, shutdown, and malfunction plan required by 40 CFR 63.6(e)(3) of Subpart A.

(B) An excused excursion, as described in 40 CFR 63.152(c)(2)(ii)(B) and 63.152(c)(2)(ii)(C), shall not be considered an excursion for purposes of 40 CFR 63.152(g)(2).

SECTION CC 40 CFR Part 63, Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks

Definitions contained in 40 CFR Part 63, Subpart H, Section 161 are applicable to the Permittee.

Emissions Limitations and Standards [326 IAC 2-7-5(1)]

CC.1 Standards: General [326 IAC 14][40 CFR 63.162 Subpart H]

(a) Pursuant to 40 CFR 63.162(a), compliance with 40 CFR Part 63, Subpart H will be determined by review of the records required by 40 CFR 63.181 and the reports required by 63.182, review of performance test results, and by inspections.

(b) Pursuant to 40 CFR 63.162(b),

(1) The permittee may request a determination of alternative means of emission limitation to the requirements of 40 CFR 63.163 through 63.170, and 40 CFR 63.172 through 63.174 as provided in 40 CFR 63.177.

(2) IDEM, OAQ will make a determination that a means of emission limitation is a permissible alternative to the requirements of 40 CFR 63.163 through 63.170, and CFR 63.172 through 63.174, the permittee shall comply with the alternative.

(c) Pursuant to 40 CFR 63.162(c), each piece of equipment in a process unit to which 40 CFR Part 63, Subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR Part 63, Subpart H. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.

(d) Pursuant to 40 CFR 63.162(d), equipment that is in vacuum service is excluded from the requirements of 40 CFR Part 63, Subpart H.

(e) Pursuant to 40 CFR 63.162(e), equipment that is in organic HAP service less than 300 hours per calendar year is excluded from the requirements of 40 CFR 63.163 through 63.174 of and 40 CFR 63.178 if it is identified as required in 40 CFR 63.181(j).

(f) Pursuant to 40 CFR 63.162(f), when each leak is detected as specified in 40 CFR 63.163 and 63.164; 40 CFR 63.168 and 63.169; and 40 CFR 63.172 through 63.174, the following requirements apply:

(1) Clearly identify the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3), and 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring.

(3) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

(g) Pursuant to 40 CFR 63.162(g), except as provided in 40 CFR 63.162(g)(1), all terms in 40 CFR Part 63, Subpart H that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), refer to the standard calendar periods unless specified otherwise in the section or subsection that imposes the requirement.

(1) If the initial compliance date does not coincide with the beginning of the standard calendar period, the permittee may elect to utilize a period beginning on the compliance date, or may elect to comply in accordance with the provisions of 40 CFR 63.162(g)(2) or (g)(3).

(2) Time periods specified in 40 CFR Part 63, Subpart H for completion of required tasks may be changed by mutual agreement between the permittee and IDEM, OAQ, as specified in 40 CFR Part 63, Subpart A. For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

(3) Except as provided in 40 CFR 63.162(g)(1) or (g)(2), where the period specified for compliance is a standard calendar period, if the initial compliance date does not coincide with the beginning of the calendar period, compliance shall be required according to the schedule specified in 40 CFR 63.162(g)(3)(i) or (g)(3)(ii), as appropriate.

(i) Compliance shall be required before the end of the standard calendar period within which the compliance deadline occurs, if there remain at least 3 days for tasks that must be performed weekly, at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or

(ii) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance deadline occurs.

(4) In all instances where a provision of 40 CFR Part 63, Subpart H requires completion of a task during each of multiple successive periods, the permittee may perform the required task at any time during each period, provided the task is conducted at a reasonable interval after completion of the task during the previous period.

(h) Pursuant to 40 CFR 63.162(h), in all cases where the provisions of 40 CFR Part 63, Subpart H require the permittee to repair leaks by a specified time after the leak is detected, it is a violation of 40 CFR Part 63, Subpart H to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of 40 CFR Part 63, Subpart H. However, if the repairs are unsuccessful, a leak is detected and the permittee shall take further action as required by applicable provisions of 40 CFR Part 63, Subpart H.

CC.2 Standards: Pumps in Light Liquid Service [326 IAC 14][40 CFR 63.163 Subpart H]

(a) Pursuant to 40 CFR 63.163(a), pumps in light liquid service must implement the provisions of 40 CFR 63.163.

(1) The provisions are to be implemented on the dates specified in the specific Subpart in 40 CFR Part 63 that references Subpart H in the phases specified below:

(i) For each group of existing process units at existing sources subject to the provisions of 40 CFR 63 Subparts F or I, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2 ½ years after the compliance date.

(ii) For new sources subject to the provisions of 40 CFR 63 Subparts F or I, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(2) The Permittee of a source subject to the provisions of 40 CFR 63 Subparts F or I, may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(3) Sources subject to other Subparts in 40 CFR Part 63 that reference Subpart H shall comply on the dates specified in the applicable Subpart.

(b) (1) Pursuant to 40 CFR63.163(b), the Permittee of a process unit subject to 40 CFR 63 Subpart H shall monitor each pump monthly to detect leaks by the method specified in 40 CFR 63.180(b), and shall comply with the requirements of 40 CFR 63.163(a) through 63.163(d), except as provided in 40 CFR 63.162(b) and 63.163(e) through 63.163(j).

(2) The instrument reading, as determined by the method as specified in 40 CFR 63.180(b) of Subpart H, that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 5,000 parts per million or greater.

(iii) For Phase III, an instrument reading of:

(A) 5,000 parts per million or greater for pumps handling polymerizing monomers;

(B) 2,000 parts per million or greater for pumps in food/medical service; and

(C) 1,000 parts per million or greater for all other pumps.

(3) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.

(c) (1) Pursuant to 40 CFR 63.163(c), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.163(c)(3) or 63.171.

(2) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:

(i) Tightening of packing gland nuts.

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(3) For pumps in Phase III to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.

(d) (1) Pursuant to 40 CFR 63.163(d)(1), the Permittee shall decide no later than the first monitoring period whether to calculate percent leaking pumps on a process unit basis or on a source-wide basis. Once the Permittee has decided, all subsequent percent calculations shall be made on the same basis.

(2) If, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the Permittee shall implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176.

(3) The number of pumps at a process unit shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process unit within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(4) Percent leaking pumps shall be determined by the following equation:

$$\%P_L=((P_L-P_S)/(P_T-P_S))\times 100$$

where:

%PL = Percent leaking pumps

PL = Number of pumps found leaking as determined through monthly monitoring as required in 40 CFR 63.163(b)(1) and 63.163(b)(2)

PT = Total pumps in organic HAP service, including those meeting the criteria in 40 CFR 63.163(e) and 63.163(f).

PS = Number of pumps leaking within 1 month of start-up during the current monitoring period.

(e) Pursuant to 40 CFR63.163(e), each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 63.163(a) through 63.163(d), provided the following requirements are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(2) The barrier fluid is not in light liquid service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(i) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid.

(ii) If an instrument reading of 1,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in 40 CFR 63.163(e)(3) is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

(6) (i) The Permittee determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If indications of liquids dripping from the pump seal exceed the criteria established in 40 CFR 63.163(e)(6)(i) or if, based on the criteria established in 40 CFR 63.163(e)(6)(i), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171.

(iv) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(f) Pursuant to 40 CFR63.163(f), any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of 40 CFR 63.163(a) through 63.163(c).

(g) Pursuant to 40 CFR63.163(g), any pump equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of 40 CFR 63.172 is exempt from the requirements of 40 CFR 63.163(b) through 63.163(e).

(h) Pursuant to 40 CFR63.163(h), any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR 63.163(b)(3) and 63.163(e)(4), and the daily requirements of 40 CFR 63.163(e)(5), provided that each pump is visually inspected as often as practicable and at least monthly.

(i) Pursuant to 40 CFR63.163(i), if more than 90 percent of the pumps at a process unit meet the criteria in either 40 CFR 63.163(e) or 63.163(f), the process unit is exempt from the requirements of 40 CFR 63.163(d).

(j) Pursuant to 40 CFR63.163(j), any pump that is designated, as described in 40 CFR 63.181(b)(7)(i), as an unsafe-to-monitor pump is exempt from the requirements of 40 CFR 63.163(b) through 63.163(e) if:

(1) The Permittee of the pump determines that the pump is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through 63.163(d); and

(2) The Permittee of the pump has a written plan that requires monitoring of the pump as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

CC.3 Standards: Compressors [326 IAC 14][40 CFR 63.164, Subpart H]

(a) Pursuant to 40 CFR 63.164(a), each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b), 63.164(h) and 63.164(i).

(b) Pursuant to 40 CFR 63.164(b), each compressor seal system as required in 40 CFR 63.164(a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or

(3) Equipped with a closed-loop system that purges the barrier fluid directly into a process stream.

(c) Pursuant to 40 CFR 63.164(c), the barrier fluid shall not be in light liquid service.

(d) Pursuant to 40 CFR 63.164(d), each barrier fluid system as described in 40 CFR 63.164(a) through 63.164(c) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e) (1) Pursuant to 40 CFR 63.164(e), each sensor as required in 40 CFR 63.164(d) shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.

(2) The Permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) Pursuant to 40 CFR 63.164(f), if the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected.

(g) (1) Pursuant to 40 CFR 63.164(g), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) Pursuant to 40 CFR 63.164(h), a compressor is exempt from the requirements of 40 CFR 63.164(a) through 63.164(g) if it is equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device that complies with the requirements of 40 CFR 63.172.

(i) Pursuant to 40 CFR 63.164(i), any compressor that is designated, as described in 40 CFR 63.181(b)(2)(ii), to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of 40 CFR 63.164(a) through 63.164(h) if the compressor:

(1) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR 63.180(c); and

(2) Is tested for compliance with 40 CFR 63.164(i)(1) initially upon designation, annually, and at other times requested by the IDEM, OAQ.

CC.4 Standards: Pressure Relief Devices in Gas/Vapor Service [326 IAC 14][40 CFR 63.165, Subpart H]

(a) Pursuant to 40 CFR 63.165(a), except during pressure releases, each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background except as provided in 40 CFR 63.165(b), as measured by the method specified in 40 CFR 63.180(c).

(b) (1) Pursuant to 40 CFR 63.165(b), after each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171.

(2) No later than 5 calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR 63.180(c).

(c) Pursuant to 40 CFR 63.165(c), any pressure relief device that is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in 40 CFR 63.172 is exempt from the requirements of 40 CFR 63.165(a) and 63.165(b).

(d) (1) Pursuant to 40 CFR 63.165(d), any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of 40 CFR 63.165(a) and 63.165(b), provided the Permittee complies with the requirements in 40 CFR 63.165(d)(2).

(2) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171.

CC.5 Standards: Sampling Connection Systems [326 IAC 14][40 CFR 63.166, Subpart H]

(a) Pursuant to 40 CFR 63.166(a), each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Pursuant to 40 CFR 63.166(b), each closed-purge, closed-loop, or closed-vent system as required in 40 CFR 63.166(a) shall:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of 40 CFR 63.172; or

(4) Collect, store, and transport the purged process fluid to a system or facility identified in 40 CFR 63.166(b)(4)(i), 63.166(b)(4)(ii), or 63.166(b)(4)(iii).

(i) A waste management unit as defined in 40 CFR 63.111 of Subpart, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR Subpart G applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of Subpart G of Part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, Subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility.

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) Pursuant to 40 CFR 63.166(c), in-situ sampling systems and sampling systems without purges are exempt from the requirements of 40 CFR 63.166(a) and 63.166(b).

CC.6 Standards: Open-Ended Valves or Lines [326 IAC 14][40 CFR 63.167, Subpart H]

(a) (1) Pursuant to 40 CFR 63.167(a), each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b), 63.167(d), and 63.167(e).

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair.

(b) Pursuant to 40 CFR 63.167(b), each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) Pursuant to 40 CFR 63.167(c), when a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR 63.167(a) at all other times.

(d) Pursuant to 40 CFR 63.167(d), open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR 63.167(a), 63.167(b) and 63.167(c).

(e) Pursuant to 40 CFR 63.167(e), open-ended valves or lines containing materials which would autocatalytically polymerize or, would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in 40 CFR 63.167(a) through 63.167(c) are exempt from the requirements of 40 CFR 63.167(a) through 63.167(c).

CC.7 Standards: Valves in Gas/Vapor Service and in Light Liquid Service [326 IAC 14][40 CFR 63.168, Subpart H]

(a) (1) Pursuant to 40 CFR 63.168(a)(1), the provisions are to be implemented on the dates set forth in the specific Subpart in 40 CFR Part 63 that references Subpart H as specified in 40 CFR 63.168(a)(1)(i), 63.168(a)(1)(ii), or 63.168(a)(1)(iii).

(i) For each group of existing process units at existing sources subject to the provisions of 40 CFR 63 Subpart F or I, the phases of the standard are:

(A) Phase I, beginning on the compliance date;

(B) Phase II, beginning no later than 1 year after the compliance date; and

(C) Phase III, beginning no later than 2 ½ years after the compliance date.

(ii) For new sources subject to the provisions of 40 CFR Subpart F or I, the applicable phases of the standard are:

(A) After initial start-up, comply with the Phase II requirements; and

(B) Beginning no later than 1 year after initial start-up, comply with the Phase III requirements.

(iii) Sources subject to other Subparts in 40 CFR Part 63 that reference 40 CFR 63 Subpart H shall comply on the dates specified in the applicable Subpart.

(2) The Permittee of a source subject to 40 CFR 63 Subpart H may elect to meet the requirements of a later phase during the time period specified for an earlier phase.

(3) The use of monitoring data generated before April 22, 1994 to qualify for less frequent monitoring is governed by the provisions of 40 CFR 63.180(b)(6).

(b) Pursuant to 40 CFR 63.168(b), the Permittee of a source subject to 40 CFR 63 shall monitor all valves, except as provided in 40 CFR 63.162(b), 63.168(h), and 63.168(i), at the intervals specified in 40 CFR 63.168(c) and 63.168(d) and shall comply with all other provisions 40 CFR 63.168, except as provided in 40 CFR 63.171, and 63.179.

(1) The valves shall be monitored to detect leaks by the method specified in 40 CFR 63.180(b).

(2) The instrument reading that defines a leak in each phase of the standard is:

(i) For Phase I, an instrument reading of 10,000 parts per million or greater.

(ii) For Phase II, an instrument reading of 500 parts per million or greater.

(iii) For Phase III, an instrument reading of 500 parts per million or greater.

(c) Pursuant to 40 CFR 63.168(c), in Phases I and II, each valve shall be monitored quarterly.

(d) Pursuant to 40 CFR 63.168(d), in Phase III, the Permittee shall monitor valves for leaks at the intervals specified below:

(1) At process units with 2 percent or greater leaking valves, calculated according to 40 CFR 63.168(e), the Permittee shall either:

(i) Monitor each valve once per month; or

(ii) [Reserved]

(2) At process units with less than 2 percent leaking valves, the Permittee shall monitor each valve once each quarter, except as provided in 40 CFR 63.168(d)(3) and 63.168(d)(4).

(3) At process units with less than 1 percent leaking valves, the Permittee may elect to monitor each valve once every 2 quarters.

(4) At process units with less than 0.5 percent leaking valves, the Permittee may elect to monitor each valve once every 4 quarters.

(e) (1) Pursuant to 40 CFR 63.168(e), percent leaking valves at a process unit shall be determined by the following equation:

$$\%V_L=(V_L/(V_T+V_C))\times 100$$

where:

%VL = Percent leaking valves as determined through periodic monitoring required in 40 CFR 63.168(b) through 63.168(d).

VL = Number of valves found leaking excluding nonrepairables as provided in 40 CFR 63.168(e)(3)(i).

VT = Total valves monitored, in a monitoring period excluding valves monitored as required by 40 CFR 63.168(f)(3).

VC = Optional credit for removed valves=0.67 × net number (i.e., total removed-total added) of valves in organic HAP service removed from process unit after the date set forth in 40 CFR 63.100(k) of Subpart F for existing process units, and after the date of initial start-up for new sources. If credits are not taken, then VC=0.

(2) For use in determining monitoring frequency, as specified in 40 CFR 63.168(d), the percent leaking valves shall be calculated as a rolling average of two consecutive monitoring periods for monthly, quarterly, or semiannual monitoring programs; and as an average of any three out of four consecutive monitoring periods for annual monitoring programs.

(3) (i) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with 40 CFR 63.168(e)(3)(ii). Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process unit may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

(ii) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process unit, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves.

(f) (1) Pursuant to 40 CFR 63.168(f), when a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(3) When a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair.

(i) The monitoring shall be conducted as specified in 40 CFR 63.180(b) and 63.180(c) as appropriate, to determine whether the valve has resumed leaking.

(ii) Periodic monitoring required by 40 CFR 63.168(b) through 63.168(d) may be used to satisfy the requirements of 40 CFR 63.168(f)(3), if the timing of the monitoring period coincides with the time specified in 40 CFR 63.168(f)(3). Alternatively, other monitoring may be performed to satisfy the requirements of 40 CFR 63.168(f)(3), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in 40 CFR 63.168(f)(3).

(iii) If a leak is detected by monitoring that is conducted pursuant to 40 CFR 63.168(f)(3), the Permittee shall follow the provisions of 40 CFR 63.168(f)(3)(iii)(A) and 63.168(f)(3)(iii)(B), to determine whether that valve must be counted as a leaking valve for purposes of 40 CFR 63.168(e).

(A) If the Permittee elected to use periodic monitoring required by 40 CFR 63.168(b) through 63.168(d) to satisfy the requirements of 40 CFR 63.168(f)(3), then the valve shall be counted as a leaking valve.

(B) If the Permittee elected to use other monitoring, prior to the periodic monitoring required by 40 CFR 63.168(b) through 63.168(d), to satisfy the requirements of 40 CFR 63.168(f)(3), then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

(g) Pursuant to 40 CFR 63.168(g), first attempts at repair include, but are not limited to, the following practices where practicable:

(1) Tightening of bonnet bolts,

(2) Replacement of bonnet bolts,

(3) Tightening of packing gland nuts, and

(4) Injection of lubricant into lubricated packing.

(h) Pursuant to 40 CFR 63.168(h), any valve that is designated, as described in 40 CFR 63.181(b)(7)(i), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR 63.168(b) through 63.168(d) if:

(1) The Permittee of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through 63.168(f); and

(2) The Permittee of the valve has a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

(i) Pursuant to 40 CFR 63.168(i), any valve that is designated, as described in 40 CFR 63.181(b)(7)(ii), as a difficult-to-monitor valve is exempt from the requirements of 40 CFR 63.168(b) through 63.168(d) if:

(1) The Permittee of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The process unit within which the valve is located is an existing source or the Permittee designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor; and

(3) The Permittee of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

(j) Pursuant to 40 CFR 63.168(j), any equipment located at a plant site with fewer than 250 valves in organic HAP service is exempt from the requirements for monthly monitoring and a quality improvement program specified in 40 CFR 63.168(d)(1). Instead, the Permittee shall monitor each valve in organic HAP service for leaks once each quarter, or comply with 40 CFR 63.168(d)(3) or 63.168(d)(4) except as provided in 40 CFR 63.168(h) and 63.168(i).

CC.8 Standards: Pumps, Valves, Connectors, and Agitators in Heavy Liquid Service; Instrumentation systems; and Pressure Relief Devices in Liquid Service [326 IAC 14][40 CFR 63.169, Subpart H]

(a) Pursuant to 40 CFR 63.169(a), pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in 40 CFR 63.169(c) and 63.169(d), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b).

(b) Pursuant to 40 CFR 63.169(b), if an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected.

(c) (1) Pursuant to 40 CFR 63.169(c), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(3) For equipment identified in 40 CFR 63.169(a) of that is not monitored by the method specified in 40 CFR 63.180(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

(d) Pursuant to 40 CFR 63.169(d), first attempts at repair include, but are not limited to, the practices described under 40 CFR 63.163(c)(2) and 63.168(g), for pumps and valves, respectively.

CC.9 Standards: Surge Control Vessels and Bottoms Receivers [326 IAC 14][40 CFR 63.170, Subpart H]

Pursuant to 40 CFR 63.170 (Standards: Surge Control Vessels and Bottoms Receivers), the Permittee shall equip each surge control vessel or bottoms receiver that is not routed back to the process and that meets the conditions specified in Table 2 or Table 3 of 40 CFR 63, Subpart H with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements in 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or 63.119(c) of Subpart G.

CC.10 Standards: Delay of Repair [326 IAC 14][40 CFR 63.171, Subpart H]

(a) Pursuant to 40 CFR 63.171(a), delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.

(b) Pursuant to 40 CFR 63.171(b), delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in organic HAP service.

(c) Pursuant to 40 CFR 63.171(c), delay of repair for valves, connectors, and agitators is also allowed if:

(1) The Permittee determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 63.172.

(d) Pursuant to 40 CFR 63.171(d), delay of repair for pumps is also allowed if:

(1) Repair requires replacing the existing seal design with a new system that the Permittee has determined under the provisions of 40 CFR 63.176(d) will provide better performance or:

(i) A dual mechanical seal system that meets the requirements of 40 CFR 63.163(e),

(ii) A pump that meets the requirements of 40 CFR 63.163(f), or

(iii) A closed-vent system and control device that meets the requirements of 40 CFR 63.163(g); and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Pursuant to 40 CFR 63.171(e), delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

CC.11 Standards: Closed-Vent Systems and Control Devices [326 IAC 14][40 CFR 63.172, Subpart H]

(a) Pursuant to 40 CFR 63.172(a), the permittee of a closed-vent systems and control devices used to comply with provisions of 40 CFR 63 Subpart H shall comply with the provisions of 40 CFR 63.172, except as provided in 40 CFR 63.162(b).

(b) Pursuant to 40 CFR 63.172(b), recovery or recapture devices (e.g., condensers and absorbers) shall be designed and operated to recover the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts par million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to the provisions of 40 CFR 63.179.

(c) Pursuant to 40 CFR 63.172(c), enclosed combustion devices shall be designed and operated to reduce the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts

per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760℃.

(d) [Reserved]

(e) Pursuant to 40 CFR 63.172(e), permittee control devices that are used to comply with the provisions of 40 CFR 63, Subpart H shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.

Note:
The intent of this provision is to ensure proper operation and maintenance of the control device.

(f) Pursuant to 40 CFR 63.172(f), except as provided in 40 CFR 63.172(k) and 63.172(l), each closed-vent system shall be inspected according to the procedures and schedule specified in 40 CFR 63.172(f)(1) and 63.172(f)(2).

(1) If the closed-vent system is constructed of hard-piping, the Permittee shall:

(i) Conduct an initial inspection according to the procedures in 40 CFR 63.172(g), and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed-vent system is constructed of duct work, the Permittee shall:

(i) Conduct an initial inspection according to the procedures in 40 CFR 63.172(g), and

(ii) Conduct annual inspections according to the procedures in 40 CFR 63.172(g).

(g) Pursuant to 40 CFR 63.172(g), each closed-vent system shall be inspected according to the procedures in 40 CFR 63.180(b).

(h) Pursuant to 40 CFR 63.172(h), leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in 40 CFR 63.172(i).

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.172(i).

(i) Pursuant to 40 CFR 63.172(i), delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the Permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(j) Pursuant to 40 CFR 63.172(j), for each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the Permittee shall comply with the provisions of either 40 CFR 63.172(j)(1) or 63.172(j)(2), except as provided in 40 CFR 63.172(j)(3).

(1) Install, set or adjust, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in 40 CFR 63.118(a)(3) [BB.11(a)(3)]. The flow indicator shall be installed at the entrance to any bypass line; or

(2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line.

(3) Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to 40 CFR 63.172(j).

(k) Pursuant to 40 CFR 63.172(k), any parts of the closed-vent system that are designated, as described in 40 CFR 63.181(b)(7)(i), as unsafe to inspect are exempt from the inspection requirements of 40 CFR 63.172(f)(1) and 63.172(f)(2) if:

(1) The Permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with 40 CFR 63.172(f)(1) or 63.172(f)(2); and

(2) The Permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually.

(l) Pursuant to 40 CFR 63.172(l), any parts of the closed-vent system that are designated, as described in 40 CFR 63.181(b)(7)(i), as difficult to inspect are exempt from the inspection requirements of 40 CFR 63.172(f)(1) and 63.172(f)(2) if:

(1) The Permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The Permittee has a written plan that requires inspection of the equipment at least once every 5 years.

(m) Pursuant to 40 CFR 63.172(m), whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of 40 CFR 63, Subpart H, such system or control device shall be operating.

(n) Pursuant to 40 CFR 63.172(n), after the compliance dates specified in 40 CFR 63.100, of Subpart F, the Permittee of any control device subject to 40 CFR 63, Subpart H that is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, Subpart BB, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265, Subpart BB, may elect to comply either with the monitoring, recordkeeping, and reporting requirements of 40 CFR 63, Subpart H, or with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, as described in 40 CFR 63.172(n), which shall constitute compliance with the monitoring, recordkeeping and reporting requirements of 40 CFR 63, Subpart H. The Permittee shall identify which option has been chosen, in the next periodic report required by 40 CFR 63.182(d).

CC.12 Standards: Agitators in Gas/Vapor Service and in Light Liquid Service
[326 IAC 14] [40 CFR 63.173, Subpart H]

(a) (1) Pursuant to 40 CFR 63.173(a), each agitator shall be monitored monthly to detect leaks by the methods specified in 40 CFR 63.180(b), except as provided in 40 CFR 63.162(b).

(2) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(b) (1) Pursuant to 40 CFR 63.173(b), each agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator.

(2) If there are indications of liquids dripping from the agitator, a leak is detected.

(c) (1) Pursuant to 40 CFR 63.173(c), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Pursuant to 40 CFR 63.173(d), each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 63.173(a), provided the requirements specified in 40 CFR 63.173(d)(1) through 63.173(d)(6) are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or

(iii) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(2) The barrier fluid is not in light liquid organic HAP service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each agitator is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal.

(i) If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, the agitator shall be monitored as specified in 40 CFR 63.180(b) to determine the presence of organic HAP in the barrier fluid.

(ii) If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(5) Each sensor as described in 40 CFR 63.173(d)(3) is observed daily or is equipped with an alarm unless the agitator is located within the boundary of an unmanned plant site.

(6) (i) The Permittee determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If indications of liquids dripping from the agitator seal exceed the criteria established in 40 CFR 63.173(d)(6)(i) or if, based on the criteria established in 40 CFR 63.173(d)(6)(i) and the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171.

(iv) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Pursuant to 40 CFR 63.173(e), any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from 40 CFR 63.173(a) through 63.173(c).

(f) Pursuant to 40 CFR 63.173(f), any agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a process or fuel gas system or to a control device that complies with the requirements of 40 CFR 63.172 is exempt from the requirements of 40 CFR 63.173(a) through 63.173(c).

(g) Pursuant to 40 CFR 63.173(g), any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR 63.173(b)(1) and 63.173(d)(4), and the daily requirements of 40 CFR 63.173(d)(5), provided that each agitator is visually inspected as often as practical and at least monthly.

(h) Pursuant to 40 CFR 63.173(h), any agitator that is difficult-to-monitor is exempt from the requirements of 40 CFR 63.173(a) through 63.173(d) if:

(1) The Permittee determines that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner;

(2) The process unit within which the agitator is located is an existing source or the Permittee designates less than three percent of the total number of agitators in a new source as difficult-to-monitor; and

(3) The Permittee follows a written plan that requires monitoring of the agitator at least once per calendar year.

(i) Pursuant to 40 CFR 63.173(i), any agitator that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements of 40 CFR 63.173(a) through 63.173(d).

(j) Pursuant to 40 CFR 63.173(j), any agitator that is designated, as described in 40 CFR 63.181(b)(7)(i), as an unsafe-to-monitor agitator is exempt from the requirements of 40 CFR 63.173(a) through 63.173(d) if:

(1) The Permittee of the agitator determines that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through 63.173(d); and

(2) The Permittee of the agitator has a written plan that requires monitoring of the agitator as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.

CC.13 Standards: Connectors in Gas/Vapor Service and in Light Liquid Service
[326 IAC 14] [40 CFR 63.174, Subpart H]

(a) Pursuant to 40 CFR 63.174(a), the Permittee of a process unit subject to 40 CFR 63, Subpart H shall monitor all connectors in gas/vapor and light liquid service, except as provided in 40 CFR 63.162(b), and 63.174(f) through 63.174(h), at the intervals specified in 40 CFR 63.174(b).

(1) The connectors shall be monitored to detect leaks by the method specified in 40 CFR 63.180(b).

(2) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.

(b) Pursuant to 40 CFR 63.174(b), the Permittee shall monitor for leaks at the intervals specified in either 40 CFR 63.174(b)(1) or 63.174(b)(2) and in 40 CFR 63.174(b)(3).

(1) For each group of existing process units within an existing source, by no later than 12 months after the compliance date, the Permittee shall monitor all connectors, except as provided in 40 CFR 63.174(f) through 63.174(h).

(2) For new sources, within the first 12 months after initial start-up or by no later than 12 months after the date of promulgation of a specific Subpart that references 40 CFR 63 Subpart H, whichever is later, the Permittee shall monitor all connectors, except as provided in 40 CFR 63.174(f) through 63.174(h).

(3) After conducting the initial survey required in 40 CFR 63.174(b)(1) or 63.174(b)(2), the Permittee shall perform all subsequent monitoring of connectors at the frequencies specified in 40 CFR 63.174(b)(3)(i) through 63.174(b)(3)(v), except as provided in 40 CFR 63.174(c)(2):

(i) Once per year (i.e., 12-month period), if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required annual or biennial monitoring period.

(ii) Once every 2 years, if the percent leaking connectors was less than 0.5 percent during the last required monitoring period. A Permittee may comply with 40 CFR 63.174(b)(3)(ii) by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The percent leaking connectors will be calculated for the total of all monitoring performed during the 2-year period.

(iii) If the Permittee of a process unit in a biennial leak detection and repair program calculates less than 0.5 percent leaking connectors from the 2-year monitoring period, the Permittee may monitor the connectors one time every 4 years. A Permittee may comply with the requirements of 40 CFR 63.174(b)(3)(iii) by monitoring at least 20 percent of the connectors each year until all connectors have been monitored within 4 years.

(iv) If a process unit complying with the requirements of 40 CFR 63.174(b) using a 4-year monitoring interval program has greater than or equal to 0.5 percent but less than 1 percent leaking connectors, the Permittee shall increase the monitoring frequency to one time every 2 years. A Permittee may comply with the requirements of 40 CFR 63.174(b)(3)(iv) by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The Permittee may again elect to use the provisions of 40 CFR 63.174(b)(3)(iii) when the percent leaking connectors decreases to less than 0.5 percent.

(v) If a process unit complying with requirements of 40 CFR 63.174(b)(3)(iii) using a 4-year monitoring interval program has 1 percent or greater leaking connectors, the Permittee shall increase the monitoring frequency to one time per year. The Permittee may again elect to use the provisions of 40 CFR 63.174(b)(3)(iii) when the percent leaking connectors decreases to less than 0.5 percent.

(4) The use of monitoring data generated before April 22, 1994 to qualify for less frequent monitoring is governed by the provisions of 40 CFR 63.180(b)(6).

(c) (1) (i) Pursuant to 40 CFR 63.174(c), except as provided in 40 CFR 63.174(c)(1)(ii), each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first 3 months after being returned to organic hazardous air pollutants service. If the monitoring detects a leak, it shall be repaired according to the provisions of 40 CFR 63.174(d), unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable connector for the purposes of 40 CFR 63.174(i)(2).

(ii) As an alternative to the requirements in 40 CFR 63.174(c)(1)(i), the Permittee may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the Permittee may not count nonrepairable connectors for the purposes of 40 CFR 63.174(i)(2). The Permittee shall calculate the percent leaking connectors for the monitoring periods described in 40 CFR 63.174(b), by setting the nonrepairable component, CAN, in the equation in 40 CFR 63.174(i)(2) to zero for all monitoring periods.

(iii) The Permittee may switch alternatives described in 40 CFR 63.174(c)(1)(i), and 63.174(c)(1)(ii), at the end of the current monitoring period he is in, provided that it is reported as required in 40 CFR 63.182 and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch.

(2) As an alternative to the requirements of 40 CFR 63.174(b)(3), each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in 40 CFR 63.174(c)(2)(iii) or 63.174(c)(2)(iv) may:

(i) Comply with the requirements of 40 CFR 63.169, and

(ii) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of 40 CFR 63.174(d).

(iii) For sources subject to 40 CFR 63, Subparts F and I, the provisions of 40 CFR 63.174(c)(2) apply to screwed connectors installed before December 31, 1992.

(iv) For sources not identified in 40 CFR 63.174(c)(2)(iii), the provisions of 40 CFR 63.174(c)(2) apply to screwed connectors installed before the date of proposal of the applicable 40 CFR 63 Subpart that references Subpart H.

(d) Pursuant to 40 CFR 63.174(d), when a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.174(g) and 63.171. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(e) [Reserved]

(f) Pursuant to 40 CFR 63.174(f), any connector that is designated, as described in 40 CFR 63.181(b)(7)(i), as an unsafe-to-monitor connector is exempt from the requirements of 40 CFR 63.174(a) if:

(1) The Permittee determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through 63.174(e); and

(2) The Permittee has a written plan that requires monitoring of the connector as frequently as practicable during safe to monitor periods, but not more frequently than the periodic schedule otherwise applicable.

(g) Pursuant to 40 CFR 63.174(g), any connector that is designated, as described in 40 CFR 63.181(b)(7)(iii), as an unsafe-to-repair connector is exempt from the requirements of 40 CFR 63.174(a), 63.174(d), and 63.174(e) if:

(1) The Permittee determines that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d); and

(2) The connector will be repaired before the end of the next scheduled process unit shutdown.

(h) (1) Pursuant to 40 CFR 63.174(h)(1), any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of 40 CFR 63.174(a) and 63.174(c) and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 63.182. An inaccessible connector is one that is:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible or ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171 and 63.174(g).

(3) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(i) Pursuant to 40 CFR 63.174(i), for use in determining the monitoring frequency, as specified in 40 CFR 63.174(b), the percent leaking connectors shall be calculated as specified in 40 CFR 63.174(i)(1) and 63.174(i)(2).

(1) For the first monitoring period, use the following equation:

$$\% C_L = C_L/(C_t + C_C) \times 100$$

where:

% CL = Percent leaking connectors as determined through periodic monitoring required in 40 CFR 63.174(a) and 63.174(b).

CL = Number of connectors measured at 500 parts per million or greater, by the method specified in 40 CFR 63.180(b).

Ct = Total number of monitored connectors in the process unit.

CC = Optional credit for removed connectors = 0.67 × net (i.e., total removed—total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable Subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then CC= 0.

(2) For subsequent monitoring periods, use the following equation:

$$\% C_L = [(C_L - C_{AN})/(C_t + C_C)] \times 100$$

where:

% CL = Percent leaking connectors as determined through periodic monitoring required in 40 CFR 63.174(a) and 63.174(b).

CL = Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in 40 CFR 63.180(b).

CAN = Number of allowable nonrepairable connectors, as determined by monitoring required in 40 CFR 63.174(b)(3) and 63.174(c) not to exceed 2 percent of the total connector population, Ct.

Ct = Total number of monitored connectors, including nonrepairables, in the process unit.

CC = Optional credit for removed connectors = 0.67 × net number (i.e., total removed—total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable Subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then CC= 0.

(j) Pursuant to 40 CFR 63.174(j), optional credit for removed connectors. If the Permittee eliminates a connector subject to monitoring under 40 CFR 63.174(b), the Permittee may receive credit for elimination of the connector, as described in 40 CFR 63.174(i), provided the requirements in 40 CFR 63.174(j)(1) through 63.174(j)(4) are met.

(1) The connector was welded after the date of proposal of the specific Subpart that references 40 CFR 63, Subpart H.

(2) The integrity of the weld is demonstrated by monitoring it according to the procedures in 40 CFR 63.180(b) or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method.

(3) Welds created after the date of proposal but before the date of promulgation of a specific Subpart that references 40 CFR 63, Subpart H are monitored or tested by 3 months after the compliance date specified in the applicable Subpart.

(4) Welds created after promulgation of the Subpart that references 40 CFR 63, Subpart H are monitored or tested within 3 months after being welded.

(5) If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not considered a welded connector and is therefore not exempt from the provisions of 40 CFR 63, Subpart H.

CC.14 Quality Improvement: Program For Pumps [326 IAC 14][40 CFR 63.176, Subpart H]

(a) Pursuant to 40 CFR 63.176(a), in Phase III, if, on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit (or plant site) or three pumps in a process unit (or plant site) leak, the Permittee shall comply with the requirements of 40 CFR 63.176 as specified below:

(1) Pumps that are in food/medical service or in polymerizing monomer service shall comply with all requirements except for those specified in 40 CFR 63.176(d)(8).

(2) Pumps that are not in food/medical or polymerizing monomer service shall comply with all requirements of 40 CFR 63.176.

(b) Pursuant to 40 CFR 63.176(b), the Permittee shall comply with the requirements of 40 CFR 63.176 until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit (or plant site). Once the performance level is achieved, the Permittee shall comply with the requirements in 40 CFR 63.163.

(c) Pursuant to 40 CFR 63.176(c), if in a subsequent monitoring period, the process unit (or plant site) has greater than 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the Permittee shall resume the quality improvement program starting at performance trials.

(d) Pursuant to 40 CFR 63.176(d), the quality improvement program shall include the following:

(1) The Permittee shall comply with the requirements in 40 CFR 63.163.

(2) The Permittee shall collect the following data, and maintain records as required in 40 CFR 63.181(h)(3), for each pump in each process unit (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit or plant site basis.

(i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.

(ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.

(iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.

(iv) If a leak is detected, the repair methods used and the instrument readings after repair.

(v) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units, a description of any maintenance or quality assurance programs used in the process unit that are intended to improve emission performance.

(3) The Permittee shall continue to collect data on the pumps as long as the process unit (or plant site) remains in the quality improvement program.

(4) The Permittee shall inspect all pumps or pump seals which exhibited frequent seal failures and were removed from the process unit due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5) (i) The Permittee shall analyze the data collected to comply with the requirements of 40 CFR 63.176(d)(2) to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process specific factors.

(ii) The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process unit or plant site. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit (or plant site).

(iii) The analysis shall include consideration of:

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using a minimum of 6 months of data. An analysis of the data shall be done each year the process unit is in the quality improvement program.

(6) A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify use of superior performing pump seal technology or pumps that can be applied to the areas identified as having poorer than average performance, except as provided in 40 CFR 63.176 (d)(6)(v). The trial program shall be used to evaluate the feasibility of using in the process unit (or plant site) the pump designs or seal technologies, and operating and maintenance practices that have been identified by others as having low emission performance.

(i) The trial program shall include on-line trials of pump seal technologies or pump designs and operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 10 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing pump seal technologies or pumps is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in 40 CFR 63.181(h)(5)(ii).

(ii) The number of pump seal technologies or pumps in the trial evaluation program shall be the lesser of 1 percent or two pumps for programs involving single process units and the lesser of 1 percent or five pumps for programs involving a plant site or groups of process units. The minimum number of pumps or pump seal technologies in a trial program shall be one.

(iii) The trial evaluation program shall specify and include documentation of:

(A) The candidate superior performing pump seal designs or technologies to be evaluated, the stages for evaluating the identified candidate pump designs or pump seal technologies, including the time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps.

(iv) The performance trials shall initially be conducted, at least, for a 6-month period beginning not later than 18 months after the start of the quality improvement program. No later than 24 months after the start of the quality improvement program, the Permittee shall have identified pump seal technologies or pump designs that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit. The Permittee shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in 40 CFR 63.176(d)(6)(vi). The initial list of superior emission performance pump designs or pump seal technologies shall be amended in the future, as appropriate, as additional information and experience is obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 employees shall be exempt from trial evaluations of pump seals or pump designs. Plant sites exempt from the trial evaluations of pumps shall begin the pump seal or pump replacement program at the start of the fourth year of the quality improvement program.

(vi) A Permittee who has conducted performance trials on all alternative superior emission performance technologies suitable for the required applications in the process unit may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible alternative superior technologies remaining. The Permittee shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Each Permittee shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit. The quality assurance program may establish any number of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under 40 CFR 63.176(d)(5), if applicable, the findings of the trial evaluation required in 40 CFR 63.176(d)(6), and the operating conditions in the process unit. The quality assurance program shall be updated each year as long as the process unit has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

(i) The quality assurance program shall:

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal;

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the Permittee of the plant site or process unit or by a designated representative; and

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished

pumps and pump seals will meet the design specifications for the pump category and will operate such that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees; and no later than the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees.

(8) Beginning at the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees and at the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees, the Permittee shall replace, as described in 40 CFR 63.176(d)(8)(i) and 63.176(d)(8)(ii), the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance which, when combined with appropriate process, operating, and maintenance practices, will result in less than 10 percent leaking pumps for specific applications in the process unit or plant site. Superior emission performance technology includes material or design changes to the existing pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

(i) Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of 40 CFR 63.163 are pumps determined to be superior performance technology.

(ii) The Permittee may delay replacement of pump seals or pumps with superior technology until the next planned process unit shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.

(iii) The pumps shall be maintained as specified in the quality assurance program.

CC.15 Alternative means of emission limitation: Enclosed-vented process units [326 IAC 14][40 CFR 63.179, Subpart H]

Pursuant to 40 CFR 63.179, process units enclosed in such a manner that all emissions from equipment leaks are vented through a closed-vent system to a control device meeting the requirements of 40 CFR 63.172 are exempt from the requirements of 40 CFR 63.163, through 63.171, and 40 CFR 63.173 and 63.174. The enclosure shall be maintained under a negative pressure at all times while the process unit is in operation to ensure that all emissions are routed to a control device.

Compliance Determination Requirements

CC.16 Test Methods and Procedures [326 IAC 14][40 CFR 63.180, Subpart H]

(a) Pursuant to 40 CFR 63.180(a), the Permittee subject to the provisions of 40 CFR Part 63, Subpart H shall comply with the test methods and procedures requirements provided in 40 CFR 63.180.

(b) Pursuant to 40 CFR 63.180(b), monitoring, as required under 40 CFR 63 Subpart H, shall comply with the following requirements:

(1) Monitoring shall comply with Method 21 of 40 CFR Part 60, Appendix A.

(2) (i) Except as provided for in 40 CFR 63.180(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR 60, Appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in 40 CFR 63.180(b)(2)(i), the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in 40 CFR 63.180(b)(2)(i).

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, Appendix A.

(4) Calibration gases shall be:

(i) Zero air (less than 10 parts per million of hydrocarbon in air); and

(ii) Mixtures of methane in air at the concentrations specified in 40 CFR 63.180(b)(4)(ii)(A) through 63.180(b)(4)(ii)(C). A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in 40 CFR 63.180(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(A) For Phase I, a mixture of methane or other compounds, as applicable, in air at a concentration of approximately, but less than, 10,000 parts per million.

(B) For Phase II, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million for agitators, 5,000 parts per million for pumps, and 500 parts per million for all other equipment, except as provided in 40 CFR 63.180(b)(4)(iii).

(C) For Phase III, a mixture of methane or other compounds, as applicable, and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators; 2,000 parts per million for pumps in food/medical service; 5,000 parts per million for pumps in polymerizing monomer service; 1,000 parts per million for all other pumps; and 500 parts per million for all other equipment, except as provided in 40 CFR 63.180(b)(4)(iii).

(iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the Permittee need not calibrate the scales that will not be used during that day's monitoring.

(5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.

(6) Monitoring data that do not meet the criteria specified in 40 CFR 63.180(b)(1) through 63.180(b)(5) may be used to qualify for less frequent monitoring under the provisions in 40 CFR 63.168(d)(2) and 63.168(d)(3) or 63.174(b)(3)(ii) or 63.174(b)(3)(iii) provided the data meet the conditions specified in 40 CFR 63.180(b)(6)(i) and 63.180(b)(6)(ii).

(i) The data were obtained before April 22, 1994.

(ii) The departures from the criteria specified in 40 CFR 63.180(b)(1) through 63.180(b)(5) or from the specified monitoring frequency of 40 CFR 63.168(c) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of Appendix A of 40 CFR Part 60 instead of 40 CFR 63.180(b)(2), or monitoring at a different leak definition if the data would

indicate the presence or absence of a leak at the concentration specified in 40 CFR Subpart H. Failure to use a calibrated instrument is not considered a minor departure.

(c) Pursuant to 40 CFR 63.180(c), when equipment is monitored for compliance as required in 40 CFR 63.164(i), 63.165(a), and 63.172(f) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by 40 CFR 63, Subpart H, the Permittee may elect to adjust or not to adjust the instrument readings for background. If a Permittee elects to not adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR 63.180(b)(1) through 63.180(b)(4). In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If the Permittee elects to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR 63.180(c)(1) through 63.180(c)(4).

(1) The requirements of 40 CFR 63.180(b)(1) through 63.180(b)(4) shall apply.

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR 60, Appendix A.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance.

(d) (1) Pursuant to 40 CFR 63.180(d)(1), each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless the Permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, Appendix A shall be used.

(2) (i) The Permittee may use good engineering judgment rather than the procedures in 40 CFR 63.180(d)(1) to determine that the percent organic HAP content does not exceed 5 percent by weight. When the Permittee and the IDEM, OAQ do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in 40 CFR 63.180(d)(1) shall be used to resolve the disagreement.

(ii) Conversely, the Permittee may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent.

(3) If the Permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in 40 CFR 63.180(d)(1), or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service.

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment.

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)][326 IAC 2-7-19]

CC.17 Recordkeeping Requirements [326 IAC 14][40 CFR 63.181, Subpart H]

(a) Pursuant to 40 CFR 63.181(a), the Permittee of more than one process unit subject to the provisions of 40 CFR 63, Subpart H may comply with the recordkeeping requirements for these

process units in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records and information required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site.

(b) Pursuant to 40 CFR 63.181(b) the following information pertaining to all equipment in each process unit subject to the requirements in 40 CFR 63.162 through 63.174 shall be recorded:

(1) (i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in 40 CFR 63.174 and instrumentation systems) subject to the requirements of 40 CFR 63, Subpart H. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of 40 CFR 63, Subpart H are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the list shall be complete no later than the completion of the initial survey required by 40 CFR 63.174 (b)(1) or 63.174(b)(2).

(ii) A schedule by process unit for monitoring connectors subject to the provisions of 40 CFR 63.174(a) and valves subject to the provisions of 40 CFR 63.168(d).

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of 40 CFR 63, Subpart H may be identified on a plant site plan, in log entries, or by other appropriate methods.

(2) (i) A list of identification numbers for equipment that the Permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 63.164(h), 63.165(c), or 63.173(f).

(ii) A list of identification numbers for compressors that the Permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).

(iii) Identification of surge control vessels or bottoms receivers subject to the provisions of 40 CFR 63, Subpart H that the Permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.170.

(3) (i) A list of identification numbers for pressure relief devices subject to the provisions in 40 CFR 63.165(a).

(ii) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.165(d).

(4) Identification of instrumentation systems subject to the provisions of 40 CFR 63, Subpart H. Individual components in an instrumentation system need not be identified.

(5) Identification of screwed connectors subject to the requirements of 40 CFR 63.174(c)(2). Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) The following information shall be recorded for each dual mechanical seal system:

(i) Design criteria required in 40 CFR 63.163(e)(6)(i), 63.164(e)(2), and 63.173(d)(6)(i) and an explanation of the design criteria; and

(ii) Any changes to these criteria and the reasons for the changes.

(7) The following information pertaining to all pumps subject to the provisions of 40 CFR 63.163(j), valves subject to the provisions of 40 CFR 63.168(h) and 63.168(i), agitators subject to the provisions of 40 CFR 63.173(h) through 63.173(j), and connectors subject to the provisions of 40 CFR 63.174(f) and 63.174(g) shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) (i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1), if the net credits for removed valves is expected to be used.

(ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j). This is not required unless the net credits for removed connectors is expected to be used.

(9) [Reserved]

(10) For any leaks detected as specified in 40 CFR 63.163 and 63.164; 40 CFR 63.168 and 63.169; and 40 CFR 63.172 through 63.174, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(c) Pursuant to 40 CFR 63.181(c), for visual inspections of equipment subject to the provisions 40 CFR 63 Subpart H (e.g., 40 CFR 63.163(b)(3), 63.163(e)(4)(i)), the Permittee shall document that the inspection was conducted and the date of the inspection. The Permittee shall maintain records as specified in 40 CFR 63.181(d) for leaking equipment identified in this inspection. These records shall be retained for 2 years.

(d) Pursuant to 40 CFR 63.181(d), when each leak is detected as specified in 40 CFR 63.163 and 63.164; 40 CFR 63.168 and 63.169; and 40 CFR 63.172 through 63.174, the following information shall be recorded:

(1) The instrument and the equipment identification number and the operator name, initials, or identification number.

(2) The date the leak was detected and the date of first attempt to repair the leak.

(3) The date of successful repair of the leak.

(4) Maximum instrument reading measured by Method 21 of 40 CFR 60, Appendix A after it is successfully repaired or determined to be nonrepairable.

(5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(i) The Permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) (i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b), as described in 40 CFR 63.174(c)(1), unless the Permittee elects to comply with the provisions of 40 CFR 63.174(c)(1)(ii).

(ii) The date and results of monitoring as required in 40 CFR 63.174(c). If identification of connectors that have been opened or otherwise had the seal

broken is made by location under 40 CFR 63.181(d)(7)(i), then all connectors within the designated location shall be monitored.

(8) [Reserved]

(9) Copies of the periodic reports as specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.

(e) [Reserved]

(f) Pursuant to 40 CFR 63.181(f), the dates and results of each compliance test required for compressors subject to the provisions in 40 CFR 63.164(i) and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in 40 CFR 63.165(a) and 63.165(b). The results shall include:

(1) The background level measured during each compliance test.

(2) The maximum instrument reading measured at each piece of equipment during each compliance test.

(g) Pursuant to 40 CFR 63.181(g), the Permittee shall maintain records of the information specified in 40 CFR 63.181(g)(1) through 63.181(g)(3) and for closed-vent systems and control devices subject to the provisions of 40 CFR 63.172. The records specified in 40 CFR 63.181(g)(1) shall be retained for the life of the equipment.

(1) The design specifications and performance demonstrations specified in 40 CFR 63.181(g)(1)(i) through 63.181(g)(1)(iv).

(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(iii) [Reserved]

(iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e) to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Records of operation of closed-vent systems and control devices, as specified in 40 CFR 63.181(g)(2)(i) through 63.181(g)(2)(iii).

(i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 63.166, and 63.170 are not operated as designed as indicated by the monitored parameters.

(ii) Dates and durations during which the monitoring system or monitoring device is inoperative.

(iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 63.166, and 63.170.

(3) Records of inspections of closed-vent systems subject to the provisions of 40 CFR 63.172, as specified in 40 CFR 63.181(g)(3)(i) and 63.181(g)(3)(ii).

(i) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1) or 63.172(f)(2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(ii) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1) or 63.172(f)(2) during which leaks were detected, the information specified in 40 CFR 63.181(d) shall be recorded.

(h) Pursuant to 40 CFR 63.181(h), each Permittee of a process unit subject to the requirements of 63.176 shall maintain the records specified in 40 CFR 63.181(h)(3) through 63.181(h)(9) for the period of the quality improvement program for the process unit.

(1) [Reserved]

(2) [Reserved]

(3) For Permittee subject to the requirements of the pump quality improvement program as specified in 40 CFR 63.176:

(i) All data required in 40 CFR 63.176(d)(2).

(ii) The rolling average percent leaking pumps.

(iii) Documentation of all inspections conducted under the requirements of 40 CFR 63.176(d)(4), and any recommendations for design or specification changes to reduce leak frequency.

(iv) The beginning and ending dates while meeting the requirements of 40 CFR 63.176(d).

(4) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.

(5) Records of all analyses required in 40 CFR 63.176(d). The records will include the following:

(i) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices.

(ii) The reasons for rejecting specific candidate superior emission performing valve or pump technology from performance trials.

(iii) The list of candidate superior emission performing valve or pump technologies, and documentation of the performance trial program items required under 40 CFR 63.176(d)(6)(iii).

(iv) The beginning date and duration of performance trials of each candidate superior emission performing technology.

(6) All records documenting the quality assurance program for valves or pumps as specified in 40 CFR 63.176(d)(7).

(7) Records indicating that all valves or pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance requirements in 40 CFR 63.176(d)(7).

(8) Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified in 40 CFR 63.176(d)(8).

(9) Information and data to show the corporation has fewer than 100 employees, including employees providing professional and technical contracted services.

(i) Pursuant to 40 CFR 63.181(i), the Permittee of equipment in heavy liquid service shall comply with the requirements of either 40 CFR 63.181(i)(1) or 63.181(i)(2), as provided in 63.181(i)(3).

(1) Retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service.

(2) When requested by IDEM, OAQ, demonstrate that the piece of equipment or process is in heavy liquid service.

(3) A determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of "in light liquid service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(j) Pursuant to 40 CFR 63.181(j), identification, either by list, location (area or group) of equipment in organic HAP service less than 300 hours per year within a process unit subject to the provisions of 40 CFR Part 63, Subpart H under 63.160.

(k) [Reserved]

CC.18 Reporting Requirements [326 IAC 14][40 CFR 63.182, Subpart H]

(a) [Reserved]

(b) [Reserved]

(c) [Reserved]

(d) Pursuant to 40 CFR 63.182(d), the Permittee of a source subject to 40 CFR 63, Subpart H shall submit Periodic Reports.

(1) A report containing the information in 40 CFR 63.182(d)(2) shall be submitted semiannually.

(2) For each process unit complying with the provisions of 40 CFR 63.163 through 63.174, the summary information listed in 40 CFR 63.182(d)(2)(i) through 63.182(d)(2)(xvi) for each monitoring period during the 6-month period.

(i) The number of valves for which leaks were detected as described in 40 CFR 63.168(b), the percent leakers, and the total number of valves monitored;

(ii) The number of valves for which leaks were not repaired as required in 40 CFR 63.168(f), identifying the number of those that are determined nonrepairable;

(iii) The number of pumps for which leaks were detected as described in 40 CFR 63.163(b), the percent leakers, and the total number of pumps monitored;

(iv) The number of pumps for which leaks were not repaired as required in 40 CFR 63.163(c);

(v) The number of compressors for which leaks were detected as described in 40 CFR 63.164(f);

(vi) The number of compressors for which leaks were not repaired as required in 40 CFR 63.164(g);

(vii) The number of agitators for which leaks were detected as described in 40 CFR 63.173(a) and 63.173(b);

(viii) The number of agitators for which leaks were not repaired as required in 40 CFR 63.173(c);

(ix) The number of connectors for which leaks were detected as described in 40 CFR 63.174(a), the percent of connectors leaking, and the total number of connectors monitored;

(x) [Reserved]

(xi) The number of connectors for which leaks were not repaired as required in 40 CFR 63.174(d), identifying the number of those that are determined nonrepairable;

(xii) [Reserved]

(xiii) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

(xiv) The results of all monitoring to show compliance with 40 CFR 63.164(i), 63.165(a), and 63.172(f) conducted within the semiannual reporting period.

(xv) If applicable, the initiation of a monthly monitoring program under 40 CFR 63.168(d)(1)(i) or a quality improvement program under either 40 CFR 63.176.

(xvi) If applicable, notification of a change in connector monitoring alternatives as described in 40 CFR 63.174(c)(1).

(xvii) If applicable, the compliance option that has been selected under 40 CFR 63.172(n).

(3) [Reserved]

(4) Any revisions to items reported in earlier Notification of Compliance Status, if the method of compliance has changed since the last report.

SECTION DD 40 CFR Part 63, Subpart YY - National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards

Definitions contained in 40 CFR Part 63, Subpart YY, Section 1101 are applicable to the Permittee.

Emissions Limitations and Standards

DD.1 Applicability: [326 IAC 14][40 CFR 63.1100 Subpart YY]

(a) [Reserved]

(b) [Reserved]

(c) [Reserved]

(d) [Reserved]

(1) If a process unit only manufactures one product, then that product shall represent the primary product of the process unit.

(2) If a process unit is designed and operated as a flexible operation unit, the primary product shall be determined as specified in 40 CFR 63.1100(d)(2)(i) or 63.1100(d)(2)(ii) based on the anticipated operations for the 5 years following the promulgation date for existing affected sources and for the first 5 years after initial startup for new affected sources.

(i) If the flexible operation unit will manufacture one product for the greatest percentage of operating time over the five-year period, then that product shall represent the primary product of the flexible operation unit.

(ii) If the flexible operation unit will manufacture multiple products equally based on operating time, then the product with the greatest production on a mass basis over the five-year period shall represent the primary product of the flexible operation unit.

(3) Once the primary product of a process unit has been determined to be a product produced by a source category subject to 40 CFR 63, Subpart YY, the Permittee of the affected source shall comply with the standards for the primary product production process unit.

(4) The determination of the primary product for a process unit, including the assessment of applicability of 40 CFR 63, Subpart YY to process units that are designed and operated as flexible operation units, shall be reported in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4) when the primary product is determined to be a product produced by a source category subject to requirements under 40 CFR 63, Subpart YY. The Notification of Compliance Status shall include the information specified in either 40 CFR 63.1100(d)(4)(i) or 63.1100(d)(4)(ii). If the primary product is determined to be something other than a product produced by a source category subject to requirements under 40 CFR 63, Subpart YY, the Permittee shall retain information, data, and analyses used to document the basis for the determination that the primary product is not produced by a source category subject to requirements under 40 CFR 63, Subpart YY.

(i) If the process unit manufactures only one product subject to requirements under 40 CFR 63, Subpart YY, the identity of that product.

(ii) If the process unit is designed and operated as a flexible operation unit, the information specified in 40 CFR 63.1100(d)(4)(ii)(A) and 63.1100(d)(4)(ii)(B), as appropriate.

(A) The identity of the primary product.

(B) Information concerning operating time and/or production mass for each product that was used to make the determination of the primary product under 40 CFR 63.1100(d)(2)(i) or 63.1100(d)(2)(ii).

(5) When a flexible operation unit that is subject to 40 CFR 63, Subpart YY is producing a product other than a product subject to 40 CFR 63, Subpart YY, or is producing a product subject to 40 CFR 63, Subpart YY that is not the primary product, the Permittee shall comply with either 40 CFR 63.1100(d)(5)(i) or 63.1100(d)(5)(ii) for each emission point.

(i) The Permittee shall control emissions during the production of all products in accordance with the requirements for the production of the primary product. As appropriate, the Permittee shall demonstrate that the parameter monitoring level established for the primary product is also appropriate for those periods when products other than the primary product are being produced. Documentation of this demonstration shall be submitted in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(ii) The Permittee shall determine, for the production of each product, whether control is required in accordance with the applicable criteria for the primary product in 40 CFR 63.1103. If control is required, the Permittee shall establish separate parameter monitoring levels, as appropriate, for the production of each product. The parameter monitoring levels developed shall be submitted in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(e) Pursuant to 40 CFR 63.1100(e), to determine the process unit to which a storage vessel shall belong, the Permittee shall sequentially follow the procedures specified in 40 CFR 63.1100(e)(1) through 63.1100(e)(8), stopping as soon as the determination is made.

(1) If a storage vessel is already subject to another 40 CFR Part 63 Subpart on the date of promulgation for an affected source under the generic MACT, that storage vessel shall belong to the process unit subject to the other Subpart.

(2) If a storage vessel is dedicated to a single process unit, the storage vessel shall belong to that process unit.

(3) If a storage vessel is shared among process units, then the storage vessel shall belong to that process unit located on the same plant site as the storage vessel that has the greatest input into or output from the storage vessel (i.e., the process unit has the predominant use of the storage vessel.)

(4) If predominant use cannot be determined for a storage vessel that is shared among process units and if only one of those process units is subject to 40 CFR 63, Subpart YY, the storage vessel shall belong to that process unit.

(5) If predominant use cannot be determined for a storage vessel that is shared among process units and if more than one of the process units are subject to standards under 40 CFR 63, Subpart YY that have different primary products, then the Permittee shall assign the storage vessel to any one of the process units sharing the storage vessel.

(6) If the predominant use of a storage vessel varies from year to year, then predominant use shall be determined based on the utilization that occurred during the year preceding the date of promulgation of standards for an affected source under 40 CFR 63, Subpart YY or based on the expected utilization for the 5 years following the promulgation date of standards for an affected source under 40 CFR 63, Subpart YY for existing affected sources, whichever is more representative of the expected operations for that storage vessel, and based on the expected utilization for the 5 years after initial startup for new affected sources. The determination of predominant use shall be reported in the Notification of Compliance Status Report required by 40 CFR 63.1110(a)(4). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If the storage vessel begins receiving material from (or sending material to) another process unit; ceases to receive material from (or send material to) a process unit; or if the applicability of 40 CFR 63, Subpart YY to a storage vessel has been determined according to the provisions of 40 CFR 63.1100(e)(1) through 63.1100(e)(6) and there is a significant change in the use of the storage vessel that could reasonably change the predominant use, the Permittee shall reevaluate the applicability of 40 CFR 63, Subpart YY to the storage vessel.

(8) Where a storage vessel is located at a major source that includes one or more process units that place material into, or receive materials from, the storage vessel, but the storage vessel is located in a tank farm, the applicability of 40 CFR 63, Subpart YY shall be determined according to the provisions in 40 CFR 63.1100(e)(8)(i) through 63.1100(e)(8)(iii).

(i) The storage vessel may only be assigned to a process unit that utilizes the storage vessel and does not have an intervening storage vessel for that product (or raw material, as appropriate). With respect to any process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the process unit flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(ii) If there is only one process unit at a major source that meets the criteria of 40 CFR 63.1100(e)(8)(i) with respect to a storage vessel, the storage vessel shall be assigned to that process unit.

(iii) If there are two or more process units at the major source that meet the criteria of 40 CFR 63.1100(e)(8)(i) with respect to a storage vessel, the storage vessel shall be assigned to one of those process units according to the provisions of 40 CFR 63.1100(e)(6). The predominant use shall be determined among only those process units that meet the criteria of 40 CFR 63.1100(e)(8)(i).

(f) Pursuant to 40 CFR 63.1100(f), to determine the process unit to which recovery equipment shall belong, the Permittee shall sequentially follow the procedures specified in 40 CFR 63.1100(f)(1) through 63.1100(f)(7), stopping as soon as the determination is made.

(1) If recovery operation equipment is already subject to another 40 CFR Part 63, Subpart on the date standards are promulgated for an affected source, that recovery operation equipment shall belong to the process unit subject to the other Subpart.

(2) If recovery operation equipment is used exclusively by a single process unit, the recovery operation shall belong to that process unit.

(3) If recovery operation equipment is shared among process units, then the recovery operation equipment shall belong to that process unit that has the greatest input into or output from the recovery operation equipment (i.e., that process unit has the predominant use of the recovery operation equipment).

(4) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if one of those process units is a process unit subject to 40 CFR Part 63, Subpart YY, the recovery operation equipment shall belong to the process unit subject to 40 CFR Part 63, Subpart YY.

(5) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if more than one of the process units are process units that have different primary products and that are subject to 40 CFR Part 63, Subpart YY, then the Permittee shall assign the recovery operation equipment to any one of those process units.

(6) If the predominant use of recovery operation equipment varies from year to year, then the predominant use shall be determined based on the utilization that occurred during the year preceding the promulgation date of standards for an affected source under 40 CFR 63, Subpart YY or based on the expected utilization for the 5 years following the promulgation date for standards for an affected source under 40 CFR 63, Subpart YY for existing affected sources, whichever is the more representative of the expected operations for the recovery operations equipment, and based on the expected utilization for the first 5 years after initial startup for new affected sources. This determination shall be reported in the Notification of Compliance Status Report required by 40 CFR 63.1110(a)(4). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If there is an unexpected change in the utilization of recovery operation equipment that could reasonably change the predominant use, the Permittee shall redetermine to which process unit the recovery operation belongs by reperforming the procedures specified in 40 CFR 63.1100(f)(2) through 63.1100(f)(6).

(g) Pursuant to 40 CFR 63.1100(g), paragraphs 40 CFR 63.1100(g)(1) through 63.1100(g)(6) specify the applicability of 40 CFR Subpart YY emission point requirements when other rules may apply. Where 40 CFR Part 63, Subpart YY allows a Permittee an option to comply with one or another regulation to comply with 40 CFR Part 63, Subpart YY, a Permittee must report which regulation

they choose to comply with in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(1) Overlap of 40 CFR Part 63, Subpart YY with other regulations for storage vessels.

(i) After the compliance dates specified in 40 CFR 63.1102, a storage vessel that must be controlled according to the requirements of 40 CFR Part 63, Subpart YY and Part 63, Subpart G is required to comply only with the storage vessel requirements of 40 CFR 63, Subpart YY.

(ii) After the compliance dates specified in 40 CFR 63.1102, a storage vessel that must be controlled according to the requirements of 40 CFR Part 63, Subpart YY and Subpart Ka or Kb of 40 CFR Part 60 is required to comply only with the storage vessel requirements of 40 CFR Part 63, Subpart YY.

(2) Overlap of 40 CFR Part 63, Subpart YY with other regulations for process vents.

(i) After the compliance dates specified in 40 CFR 63.1102, a process vent that must be controlled according to the requirements of 40 CFR Part 63, Subpart YY and Part 63, Subpart G is in compliance with 40 CFR Part 63, Subpart YY if it complies with either set of requirements. The Permittee must specify the rule with which they will comply in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(ii) After the compliance dates specified in 40 CFR 63.1102, a process vent that must be controlled according to the requirements of 40 CFR Part 63, Subpart YY and Subpart III, RRR or NNN of 40 CFR Part 60 is required to comply only with the process vent requirements of 40 CFR Part 63, Subpart YY.

(3) Overlap of 40 CFR Part 63, Subpart YY with other regulations for transfer racks. After the compliance dates specified in 40 CFR 63.1102, a transfer rack that must be controlled according to the requirements 40 CFR Part 63, Subpart YY and Part 63, Subpart G is required to comply only with the transfer rack requirements of 40 CFR Part 63, Subpart YY.

(4) Overlap of 40 CFR Part 63, Subpart YY with other regulations for equipment leaks.

(i) After the compliance dates specified in 40 CFR 63.1102, equipment that must be controlled according to 40 CFR Part 63, Subpart YY and 40 CFR Part 60, Subpart VV, or 40 CFR Part 61, Subpart J or Subpart V, is required only to comply with the equipment leak requirements of 40 CFR Part 63, Subpart YY.

(ii) After the compliance dates specified in 40 CFR 63.1102, equipment that must be controlled according to 40 CFR Part 63, Subpart YY and Part 63, Subpart H of is in compliance with the equipment leak requirements of 40 CFR Part 63, Subpart YY if it complies with either set of requirements. The Permittee must specify the rule with which they will comply in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(5) Overlap of 40 CFR Part 63, Subpart YY with other regulations for wastewater for source categories other than ethylene production.

(i) After the compliance dates specified in 40 CFR 63.1102 for an affected source subject to 40 CFR Part 63, Subpart YY, a wastewater stream that is subject to the wastewater requirements of 40 CFR Part 63, Subpart YY and the wastewater requirements of Part 63, Subparts F, G, and H (collectively known as the “HON”) shall be deemed to be in compliance with the requirements of 40 CFR Part 63, Subpart YY if it complies with either set of requirements. In any instance where a source subject to 40 CFR Part 63, Subpart YY is colocated with a Synthetic Organic Chemical Manufacturing Industry (SOCMI) source, and a single wastewater treatment facility treats both Group 1 wastewaters and wastewater residuals from the source subject to 40 CFR Part 63, Subpart YY and wastewaters from the SOCMI source, a certification by the treatment facility that they will manage and treat the waste in conformity with the specific control requirements set forth in 40 CFR 63.133 through 63.147 will also be deemed sufficient to satisfy the certification requirements for wastewater treatment under 40 CFR Part 63, Subpart YY.

(ii) After the compliance dates specified in 40 CFR 63.1102 for an affected source subject to 40 CFR Part 63, Subpart YY, a wastewater stream that is subject to control requirements in the Benzene Waste NESHAP (40 CFR Part 61, Subpart FF) and 40 CFR Part 63, Subpart YY is required to comply with both rules.

(6) Overlap of 40 CFR Part 63, Subpart YY with other regulations for waste for the ethylene production source category.

(i) After the compliance date specified in 40 CFR 63.1102, a waste stream that is conveyed, stored, or treated in a wastewater stream management unit, waste management unit, or wastewater treatment system that receives streams subject to both the control requirements of 40 CFR 63.1103(e)(3) for ethylene production sources and the provisions of 40 CFR 63.133 through 63.147 shall comply as specified in 40 CFR 63.1100(g)(6)(i)(A) through 63.1100(g)(6)(i)(C). Compliance with the provisions of 40 CFR 63.1100(g)(6)(i) shall constitute compliance with the requirements of 40 CFR Part 63, Subpart YY for that waste stream.

(A) Comply with the provisions in 40 CFR 63.133 through 63.137 and 63.140 for all equipment used in the storage and conveyance of the waste stream.

(B) Comply with the provisions in 40 CFR 63.1103(e), 63.138, and 63.139 for the treatment and control of the waste stream.

(C) Comply with the provisions in 40 CFR 63.143 through 63.148 for monitoring and inspections of equipment and for recordkeeping and reporting requirements. The Permittee is not required to comply with the monitoring, recordkeeping, and reporting requirements associated with the treatment and control requirements in 40 CFR 61.355 through 61.357.

(ii) After the compliance date specified in 40 CFR 63.1102, compliance with 63.1103(e) shall constitute compliance with the Benzene Waste Operations NESHAP (40 CFR Part 61, Subpart FF) for waste streams that are subject to both the control requirements of 40 CFR 63.1103(e)(3) for ethylene production sources and the control requirements of 40 CFR Part 61, Subpart FF.

DD.2 Source category-specific requirements: [326 IAC 14][40 CFR 63.1103 Subpart YY]

(a) [Reserved]

(b) [Reserved]

(c) [Reserved]

(d) Pursuant to 40 CFR 63.1103(d), polycarbonate production applicability, definitions, and requirements:

(1) Applicability

(i) Affected source. For the polycarbonate production (as defined in 40 CFR 63.1103(d)(2)) source category, the affected source shall comprise all emission points, in combination, listed in 40 CFR 63.1103(d)(1)(i)(A) through 63.1103(d)(1)(i)(D), that are part of a polycarbonate production process unit located at a major source as defined in Section 112(a) of the Clean Air Act. For the purposes of this rule, a polycarbonate production process unit is a unit that produces polycarbonate by interfacial polymerization from bisphenols and phosgene. Phosgene production units that are associated with polycarbonate production process units are considered to be part of the polycarbonate production process. A phosgene production unit consists of the reactor in which phosgene is formed and all equipment (listed in 40 CFR 63.1103(d)(1)(i)(A) through 63.1103(d)(1)(i)(D)) downstream of the reactor that provides phosgene for the production of polycarbonate. Therefore, for the purposes of this rule, such a phosgene production unit is considered to be a polycarbonate production process unit.

(A) All storage vessels that store liquids containing organic HAP.

(B) All process vents from continuous and batch unit operations.

(C) All wastewater streams.

(D) Equipment (as defined in 40 CFR 63.1101) that contains or contacts organic HAP.

(ii) Compliance schedule. The compliance schedule, for affected sources as defined in 40 CFR 63.1103(d)(1)(i), is specified in 40 CFR 63.1102(a).

(2) Definitions. Polycarbonate production means a process engaged in the production of a special class of polyester formed from any dihydroxy compound and any carbonate diester or by ester exchange. Polycarbonate may be produced by solution or emulsion polymerization, although other methods may be used. A typical method for the manufacture of polycarbonate includes the reaction of bisphenol-A with phosgene in the presence of pyridine or other catalyst to form polycarbonate. Methylene chloride or other solvents are used in this polymerization reaction.

(3) Requirements. Tables 5 and 6 of 40 CFR 63.1103 specify the applicability criteria and standards for existing and new sources within the polycarbonate production source category. The Permittee must control organic HAP emissions from each affected source emission point by meeting the applicable requirements specified in Tables 5 and 6 of 40 CFR 63.1103. Applicability assessment procedures and methods are specified in 40 CFR 63.1104 through 63.1107. A Permittee of an affected source is not required to perform tests, TRE calculations or other applicability assessment procedures if they opt to comply with the most stringent requirements for an applicable emission point pursuant to 40 CFR Part 63, Subpart YY. General compliance, recordkeeping, and reporting requirements are specified in 40 CFR 63.1108 through 63.1112.

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) [Reserved]

DD.3 Wastewater provisions: [326 IAC 14][40 CFR 63.1106 Subpart YY]

(a) Pursuant to 40 CFR 63.1106(a), process wastewater; Except as specified in 40 CFR 63.1106(a)(1) through 63.1106(a)(16), the Permittee of each affected source shall comply with the HON process wastewater requirements in 40 CFR 63.132 through 63.148.

(1) When terms used in 40 CFR 63.132 through 63.148 are defined in 40 CFR 63.1101, the definition in 63.1101 shall apply, for the purposes of Subpart YY. For terms used in 40 CFR 63.132 through 63.148 that are not defined in 40 CFR 63.1101, the definitions in 40 CFR 63.101 and 63.111 shall apply.

(2) When the term chemical manufacturing production process unit, or CMPU, is used in 40 CFR 63.132 through 63.148, the phrase “a process unit whose primary product is a product produced by a source category subject to 40 CFR 63, Subpart YY” shall apply, for the purposes of 40 CFR 63, Subpart YY.

(3) The Permittee of affected sources are not required to comply with 40 CFR 63.132(b)(1), 63.132(d), and 63.138(c). Further, the Permittee is exempt from all requirements in 40 CFR 63.132 through 63.148 that pertain solely and exclusively to organic HAP listed in Table 8 of 40 CFR Part 63, Subpart G.

(4) When the determination of equivalence criteria in 40 CFR 63.102(b) is referred to in 40 CFR 63.132, 63.133, and 63.137, the alternative nonopacity emission standard provisions in 40 CFR 63.6(g) shall apply, for the purposes of 40 CFR 63, Subpart YY.

(5) When the HON storage vessel requirements for internal floating roofs contained in 40 CFR 63.119(b) are referred to in 63.133(a)(2)(ii), the requirements in 40 CFR 63.1063(a)(1)(i), 63.1063(a)(2), and 63.1063(b) shall apply, for the purposes of 40 CFR 63, Subpart YY.

(6) When the HON storage vessel requirements for external floating roofs in 40 CFR 63.119(c), 63.120(b)(5) and 63.120(b)(6) are referred to in 40 CFR 63.133(a)(2)(iii) and 63.133(d), the requirements in 40 CFR 63.1063(a)(1)(ii), 63.1063(a)(2), and 63.1063(b) shall apply, for the purposes of 40 CFR 63, Subpart YY.

(7) For the purposes of 40 CFR 63, Subpart YY, 63.1063(c)(2)(iv) shall apply instead of 63.133(e).

(8) [Reserved]

(9) When 40 CFR 63.147(d) requires the Permittee to keep records of the daily average value of each continuously monitored parameter for each operating day as specified in 40 CFR 63.152(f), the Permittee shall keep records of each continuously monitored parameter for each operating day as specified in 40 CFR 63.998(b).

(10) When 40 CFR 63.132(a) and 63.132(b) refer to the “applicable dates specified in 40 CFR 63.100 of Subpart F,” the applicable compliance dates specified in 40 CFR 63.1102 shall apply, for purposes of 40 CFR 63, Subpart YY.

(11) Where 40 CFR 63.152(b) and/or the Notification of Compliance Status is referred to in 40 CFR 63.132 through 63.148, the Notification of Compliance Status requirements contained in 40 CFR 63.1110(a)(3) shall apply, for purposes of 40 CFR 63, Subpart YY.

(12) Where 40 CFR 63.152(c) and/or the Periodic Report requirements are referred to 40 CFR 63.132 through 63.148, the Periodic Report requirements contained in 40 CFR 63.1110(a)(4) shall apply, for purposes of 40 CFR 63, Subpart YY.

(13) When Method 18 of Appendix A to Part 60 specified in 40 CFR 63.139(e)(1)(ii), 63.145(d)(4), or 63.145(i)(2), either Method 18 or Method 25A may be used. The use of Method 25A of Appendix A to Part 60 shall comply with 40 CFR 63.1106(a)(13)(i) and 63.1106(a)(13)(ii).

(i) The organic HAP used as the calibration gas for Method 25A of Appendix A of Part 60 shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A of Appendix A of Part 60 is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(14) When the HON recordkeeping requirements for by-pass lines in 40 CFR 63.118(a)(3) is referred to in 40 CFR 63.148(f), the requirements in 40 CFR 63.998(d)(1)(ii)(A) shall apply, for the purposes of 40 CFR 63, Subpart YY.

(15) When the Initial Notification requirements in 40 CFR 63.182(b) are referred to in 40 CFR 63.148(j), the requirements in 40 CFR 63.1110(c) shall apply, for the purposes of 40 CFR 63, Subpart YY.

(16) For the purposes of 40 CFR 63, Subpart YY, 40 CFR 63.148(k) shall not apply.

(b) Pursuant to 40 CFR 63.1106(b), maintenance wastewater; The Permittee of each affected source shall comply with the HON maintenance wastewater requirements in 40 CFR 63.105. When terms used in 40 CFR 63.105 are defined in 40 CFR 63.1101, the definition in 40 CFR 63.1101 shall apply, for the purpose of 40 CFR 63, Subpart YY. For terms used in 40 CFR 63.105 that are not defined in 40 CFR 63.1101, the definitions in 40 CFR 63.101 and 63.111 shall apply.

(c) Pursuant to 40 CFR 63.1106(c), liquid streams in open systems; The Permittee shall comply with the provisions of Table 35 of 40 CFR Part 63, Subpart G for each item of equipment meeting the criteria specified in 40 CFR 63.1106(c)(1) through 63.1106(c)(3) and either 40 CFR 63.1106(c)(4)(i) or 63.1106(c)(4)(ii), with the exceptions provided in 40 CFR 63.1106(c)(5) and 63.1106(c)(6).

(1) The item of equipment is one of the types of equipment identified in 40 CFR 63.1106(c)(1)(i) through 63.1106(c)(1)(vii).

(i) Drain or drain hub;

(ii) Manhole (including sumps and other points of access to a conveyance system);

(iii) Lift station;

(iv) Trench;

(v) Pipe;

(vi) Oil/water separator; and

(vii) Tanks with capacities of 38 m3 or greater.

(2) The item of equipment is part of an affected source that is subject to 40 CFR 63, Subpart YY.

(3) The item of equipment is controlled less stringently than in Table 35 of 40 CFR Part 63, Subpart G, and the item of equipment is not otherwise exempt from the provisions of 40 CFR 63, Subpart YY, or a referenced Subpart.

(4) The item of equipment:

(i) Is a drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 parts per million by weight of Table 9 compounds (as defined under 40 CFR 63, Subpart YY) at any flow rate; or a total annual average concentration greater than or equal to 1,000 parts per million by weight of Table 9 compounds (as defined under 40 CFR 63, Subpart YY) at an annual average flow rate greater than or equal to 10 liters per minute.

(ii) Is a tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 parts per million by weight of Table 9 compounds (as defined under 40 CFR 63, Subpart YY) at an annual average flow rate greater than or equal to 10 liters per minute. The Permittee shall determine the characteristics of the stream as specified in 40 CFR 63.1106(c)(4)(ii)(A) and 63.1106(c)(4)(ii)(B).

(A) The characteristics of the stream being received shall be determined at the inlet to the tank.

(B) The characteristics shall be determined according to the procedures in 40 CFR 63.144(b) and 63.144(c).

(5) When terms used in Table 35 of 40 CFR Part 63, Subpart G are defined in 40 CFR 63.1101, the definition in 63.1101 shall apply, for the purpose of 40 CFR 63, Subpart YY. For terms used in Table 35 of 40 CFR Part 63, Subpart G that are not defined in 40 CFR 63.1101, the definitions in 40 CFR 63.101 and 63.111 shall apply.

(6) When Table 35 of 40 CFR Part 63, Subpart G refers to 40 CFR 63.119(e)(1) or 63.119(e)(2) in the requirements for tanks, the requirements in 40 CFR 63.982(a)(1) shall apply, for purposes of 40 CFR 63, Subpart YY.

(d) [Reserved]

Compliance Determination Requirements

DD.4 Process vents from continuous unit operations: applicability assessment procedures and methods: [326 IAC 14][40 CFR 63.1104 Subpart YY]

(a) Pursuant to 40 CFR 63.1104(a), general. The provisions of 40 CFR 63.1104 provide calculation and measurement methods for criteria that are required by 40 CFR 63.1103(d) to be used to determine applicability of the control requirements for process vents from continuous unit operations. The Permittee of a process vent is not required to determine the criteria specified for a process vent that is being controlled in accordance with the applicable weight-percent, TOC concentration, or organic HAP concentration requirement in Table 5 or 6 of 40 CFR 63.1103(d).

(b) Pursuant to 40 CFR 63.1104(b), sampling sites; For purposes of determining process vent applicability criteria, the sampling site shall be located as specified in 40 CFR 63.1104(b)(1) through 63.1104(b)(4), as applicable.

(1) Sampling site location if TRE determination is required. If the applicability criteria specified in Table 5 or 6 of 40 CFR 63.1103(d) includes a TRE index value, the sampling site for determining volumetric flow rate, regulated organic HAP concentration, total organic HAP or TOC concentration, heating value, and TRE index value, shall be after the final recovery device (if any recovery devices are present) but prior to the inlet of any control device that is present, and prior to release to the atmosphere.

(2) Sampling site location if TRE determination is not required. If the applicability criteria specified in Table 5 or 6 of 40 CFR 63.1103(d) does not include a TRE index value, the sampling site for determining volumetric flow rate, regulated organic HAP concentration, total organic HAP or TOC concentration, and any other specified parameter shall be at the exit from the unit operation before any control device.

(3) Sampling site selection method. Method 1 or 1A of 40 CFR Part 60, Appendix A, as appropriate, shall be used for selection of the sampling site. No traverse site selection method is needed for process vents smaller than 0.10 meter (0.33 foot) in nominal inside diameter.

(4) Sampling site when a halogen reduction device is used prior to a combustion device. A Permittee using a scrubber to reduce the process vent halogen atom mass emission rate to less than 0.45 kilograms per hour (0.99 pound per hour) prior to a combustion control device in compliance with 40 CFR 63.1103 (as appropriate) shall determine the halogen atom mass emission rate prior to the combustion device according to the procedures in 40 CFR 63.1104(i).

(c) Pursuant to 40 CFR 63.1104(c), applicability assessment requirement; The TOC or organic HAP concentrations, process vent volumetric flow rates, process vent heating values, process vent TOC or organic HAP emission rates, halogenated process vent determinations, process vent TRE index values, and engineering assessments for process vent control applicability assessment requirements are to be determined during maximum representative operating conditions for the process, except as provided in 40 CFR 63.1104(d), or unless IDEM, OAQ specifies or approves alternate operating conditions. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of an applicability test.

(d) [Reserved]

(e) Pursuant to 40 CFR 63.1104(e), TOC or Organic HAP concentration; The TOC or organic HAP concentrations shall be determined based on 40 CFR 63.1104(e)(1), 63.1104(e)(2), or 63.1104(k), or any other method or data that have been validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A. For concentrations needed for comparison with the appropriate control applicability concentrations specified in Table 5 or 6 of 40 CFR 63.1103(d), TOC or organic HAP concentration shall be determined based on 40 CFR 63.1104(e)(1), 63.1104(e)(2), or 63.1104(k) or any other method or data that has been validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A. The Permittee shall record the TOC or organic HAP concentration as specified in 40 CFR 63.1104(l)(3).

(1) Method 18. The procedures specified in 40 CFR 63.1104(e)(1)(i) and 63.1104(e)(1)(ii) shall be used to calculate parts per million by volume concentration using Method 301 of 40 CFR Part 63, Appendix A:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(ii) The concentration of either TOC (minus methane and ethane) or regulated organic HAP emissions shall be calculated according to 40 CFR 63.1104(e)(1)(ii)(A) or 63.1104(e)(1)(ii)(B), as applicable.

(A) The TOC concentration (CTOC) is the sum of the concentrations of the individual components and shall be computed for each run using Equation 1:

$$C_{TOC} = \frac{\sum_{i=1}^{x}\left(\sum_{j=1}^{n} C_{ji}\right)}{x} \qquad [Eq.\ 1]$$

Where:

CTOC = Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

Cji = Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n = Number of components in the sample. x = Number of samples in the sample run.

(B) The regulated organic HAP or total organic HAP concentration (CHAP) shall be computed according to Equation 1 in 40 CFR 63.1104(e)(1)(ii)(A) except that only the regulated or total organic HAP species shall be summed, as appropriate.

(2) Method 25A. The procedures specified in 40 CFR 63.1104(e)(2)(i) through 63.1104(e)(2)(vi) shall be used to calculate parts per million by volume concentration using Method 25A of 40 CFR Part 60, Appendix A.

(i) Method 25A of 40 CFR Part 60, Appendix A shall be used only if a single organic HAP compound comprises greater than 50 percent of total organic HAP or TOC, by volume, in the process vent.

(ii) The process vent composition may be determined by either process knowledge, test data collected using an appropriate Environmental Protection Agency method or a method or data validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A. Examples of information that could constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current process vent conditions.

(iii) The organic compound used as the calibration gas for Method 25A of 40 CFR Part 60, Appendix A shall be the single organic HAP compound present at greater than 50 percent of the total organic HAP or TOC by volume.

(iv) The span value for Method 25A of 40 CFR Part 60, Appendix A shall be equal to the appropriate control applicability concentration value specified in the applicable table(s) presented in 40 CFR 63.1103.

(v) Use of Method 25A of 40 CFR Part 60, Appendix A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(vi) The Permittee shall demonstrate that the concentration of TOC including methane and ethane measured by Method 25A of 40 CFR Part 60, Appendix A is below one-half the appropriate control applicability concentration specified in the applicable table for a subject source category in 40 CFR 63.1103 in order to qualify for a low organic HAP concentration exclusion.

(f) Pursuant to 40 CFR 63.1104(f), the process vent volumetric flow rate (QS), in standard cubic meters per minute at 20℃, shall be determined as specified in 40 CFR 63.1104(f)(1) or 63.1104(f)(2) and shall be recorded as specified in 40 CFR 63.1109(d).

(1) Use Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR Part 60, Appendix A, as appropriate. If the process vent tested passes through a final steam jet ejector and is not condensed, the stream volumetric flow shall be corrected to 2.3 percent moisture; or

(2) The engineering assessment procedures in 40 CFR 63.1104(k) can be used for determining volumetric flow rates.

(g) Pursuant to 40 CFR 63.1104(g), the net heating value shall be determined as specified in 40 CFR 63.1104(g)(1) and 63.1104(g)(2), or by using the engineering assessment procedures in 40 CFR 63.1104(k).

(1) The net heating value of the process vent shall be calculated using Equation 2:

$$H_T = K_1\left(\sum_{j=1}^{n} D_j H_j\right) \qquad [Eq.\ 2]$$

Where:

HT = Net heating value of the sample, megaJoule per standard cubic meter, where the net enthalpy per mole of process vent is based on combustion at 25°C and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to 1 mole is 20°C, as in the definition of Qs (process vent volumetric flow rate).

K1 = Constant, 1.740 × 10-7 (parts per million)-1(gram-mole per standard cubic meter) (megaJoule per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20°C.

Dj = Concentration on a wet basis of compound j in parts per million, as measured by procedures indicated in 40 CFR 63.1104(e)(2). For process vents that pass through a final steam jet and are not condensed, the moisture is assumed to be 2.3 percent by volume.

Hj = Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25°C and 760 millimeters mercury.

(2) The molar composition of the process vent (Dj) shall be determined using the methods specified in 40 CFR 63.1104(g)(2)(i) through 63.1104(g)(2)(iii):

(h) Pursuant to 40 CFR 63.1104(h), the emission rate of TOC (minus methane and ethane) (ETOC) and the emission rate of the regulated organic HAP or total organic HAP (EHAP) in the process vent, as required by the TRE index value equation specified in 40 CFR 63.1104(j), shall be calculated using Equation 3:

$$E = K_2\left(\sum_{j=1}^{n} C_j M_j\right) Q_s \qquad [Eq.\ 3]$$

Where:

E = Emission rate of TOC (minus methane and ethane) (ETOC) or emission rate of the regulated organic HAP or total organic HAP (EHAP) in the sample, kilograms per hour.

K2 = Constant, 2.494 × 10-6 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20°C.

n = Number of components in the sample.

Cj = Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR Part 60, Appendix A as indicated in 40 CFR 63.1104(e). If the TOC emission rate is being calculated, Cj includes all organic compounds measured minus methane and ethane; if the total organic HAP emission rate is being calculated, only organic HAP compounds are included; if the regulated organic HAP emission rate is being calculated, only regulated organic HAP compounds are included.

Mj = Molecular weight of organic compound j, gram/gram-mole.

Qs = Process vent flow rate, dry standard cubic meter per minute, at a temperature of 20°C.

(i) Pursuant to 40 CFR 63.1104(i), in order to determine whether a process vent is halogenated, the mass emission rate of halogen atoms contained in organic compounds shall be calculated

according to the procedures specified in 40 CFR 63.1104(i)(1) and 63.1104(i)(2). A process vent is considered halogenated if the mass emission rate of halogen atoms contained in the organic compounds is equal to or greater than 0.45 kilograms per hour.

(1) The process vent concentration of each organic compound containing halogen atoms (parts per million by volume, by compound) shall be determined based on one of the procedures specified in 40 CFR 63.1104(i)(1)(i) through 63.1104(i)(1)(iv):

(i) Process knowledge that no halogen or hydrogen halides are present in the process vent, or

(ii) Applicable engineering assessment as discussed in 40 CFR 63.1104(k), or

(iii) Concentration of organic compounds containing halogens or hydrogen halides as measured by Method 26 or 26A of 40 CFR Part 60, Appendix A, or

(iv) Any other method or data that have been validated according to the applicable procedures in Method 301 of 40 CFR Part 63, Appendix A.

(2) Equation 4 shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 Q \left(\sum_{j=1}^{n} \sum_{i=1}^{m} C_j * L_{ji} * M_{ji} \right) \quad [Eq.\ 4]$$

Where:

E = Mass of halogen atoms, dry basis, kilogram per hour,

K2 = Constant, 2.494 × 10-6 (parts per million)-1 (kilogram-mole per standard cubic meter) (minute per hour), where standard temperature is 20°C.

Q = Flow rate of gas stream, dry standard cubic meters per minute, determined according to 40 CFR 63.1104(f)(1) or 63.1104(f)(2).

n = Number of halogenated compounds j in the gas stream.

j = Halogenated compound j in the gas stream.

m = Number of different halogens i in each compound j of the gas stream.

i = Halogen atom i in compound j of the gas stream.

Cj = Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

Lji = Number of atoms of halogen i in compound j of the gas stream.

Mji = Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

(j) Pursuant to 40 CFR 63.1104(j), the Permittee shall calculate the TRE index value of the process vent using the equations and procedures in 40 CFR 63.1104(j), as applicable, and shall maintain records specified in 40 CFR 63.1104(l)(1) or 63.1104(m)(2), as applicable.

(1) TRE index value equation. The equation for calculating the TRE index value is Equation 5:

$$TRE = 1/E_{HAP} * [A + B(Q_S) + C(H_T) + D(E_{TOC})] \quad [Eq.\ 5]$$

Where:

TRE = TRE index value.

A, B, C, D = Coefficients presented in Table 1 of 40 CFR 63.1104.

EHAP = Emission rate of total organic HAP, kilograms per hour, as calculated according to 40 CFR 63.1104(h) or 63.1104(k).

QS = process vent flow rate, standard cubic meters per minute, at a standard temperature of 20℃, as calculated according to 40 CFR 63.1104(f) or 63.1104(k).

HT = process vent net heating value, megaJoules per standard cubic meter, as calculated according to 40 CFR 63.1104(g) or 63.1104(k).

ETOC = Emission rate of TOC (minus methane and ethane), kilograms per hour, as calculated according to 40 CFR 63.1104(h) or 63.1104(k).

(2) Nonhalogenated process vents. The Permittee of a nonhalogenated process vent shall calculate the TRE index value by using the equation and appropriate nonhalogenated process vent parameters in Table 1 of 40 CFR 63.1104 for process vents at existing and new sources. The lowest TRE index value is to be selected.

(3) Halogenated process vents. The Permittee of a halogenated process vent stream, as determined according to procedures specified in 40 CFR 63.1104(i) or 63.1104(k), shall calculate the TRE index value using the appropriate halogenated process vent parameters in Table 1 of 40 CFR 63.1104 for existing and new sources.

(k) Pursuant to 40 CFR 63.1104(k), for purposes of TRE index value determinations, engineering assessments may be used to determine process vent flow rate, net heating value, TOC emission rate, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value. Engineering assessments shall meet the requirements of 40 CFR 63.1104(k)(1) through 63.1104(k)(4). If a process vent flow rate or process vent organic HAP or TOC concentration is being determined for comparison with the applicable flow rate or concentration value presented in Table 5 or 6 of 40 CFR 63.1103(d) to determine control requirement applicability, engineering assessment may be used to determine the flow rate or concentration for the representative operating conditions expected to yield the highest flow rate or concentration.

(1) If the TRE index value calculated using such engineering assessment and the TRE index value equation in 40 CFR 63.1104(j) is greater than 4.0, then the Permittee is not required to perform the measurements specified in 40 CFR 63.1104(e) through 63.1104(i).

(2) If the TRE index value calculated using such engineering assessment and the TRE index value equation in 40 CFR 63.1104(j) is less than or equal to 4.0, then the Permittee is required either to perform the measurements specified in 40 CFR 63.1104(e) through 63.1104(i) for control applicability assessment or comply with the requirements (or standards) specified in Table 5 or 6 of 40 CFR 63.1103(d) (as applicable).

(3) Engineering assessment includes, but is not limited to, the examples specified in 40 CFR 63.1104(k)(3)(i) through 63.1104(k)(3)(iv):

(i) Previous test results, provided the tests are representative of current operating practices at the process unit.

(ii) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(iii) Maximum flow rate, TOC emission rate, organic HAP emission rate, organic HAP or TOC concentration, or net heating value limit specified or implied within a permit limit applicable to the process vent.

(iv) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to those specified in 40 CFR 63.1104(k)(3)(iv)(A) through 63.1104(k)(3)(iv)(D):

(A) Use of material balances based on process stoichiometry to estimate maximum TOC or organic HAP concentrations,

(B) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities,

(C) Estimation of TOC or organic HAP concentrations based on saturation conditions, and

(D) Estimation of maximum expected net heating value based on the stream concentration of each organic compound or, alternatively, as if all TOC in the stream were the compound with the highest heating value.

(4) All data, assumptions, and procedures used in the engineering assessment shall be documented. The Permittee shall maintain the records specified in 40 CFR 63.1104(l)(1) through 63.1104(l)(4), as applicable.

(l) [Applicable under DD.7]

(m) [Applicable under DD.7]

(n) Pursuant to 40 CFR 63.1104(n), parameter monitoring of certain process vents. A Permittee who maintains a TRE index value (if applicable) in the applicable TRE index value monitoring range as specified in an applicable table presented in 40 CFR 63.1103 without using a recovery device shall report a description of the parameter(s) to be monitored to ensure the process vent is operated in conformance with its design or process and achieves and maintains the TRE index value above the specified level, and an explanation of the criteria used to select parameter(s). A Permittee who maintains a TRE index value (if applicable) in the applicable TRE index monitoring range as specified in an applicable Table presented in 40 CFR 63.1103 by using a recovery device shall comply with the requirements of 40 CFR 63.993(c).

DD.5 Equipment leaks: applicability assessment procedures and methods: [326 IAC 14][40 CFR 63.1107 Subpart YY]

(a) Pursuant to 40 CFR 63.1107(a), each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless a Permittee demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed the percent by weight control applicability criteria specified in 40 CFR 63.1103 for an affected source on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR Part 60, Appendix A shall be used.

(b) Pursuant to 40 CFR 63.1107(b), a Permittee may use good engineering judgment rather than the procedures in 40 CFR 63.1107(a) to determine that the percent organic HAP content does not exceed the percent by weight control applicability criteria specified in 40 CFR 63.1103 for an affected source. When a Permittee and IDEM, OAQ do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in 40 CFR 63.1107(a) shall be used to resolve the disagreement.

(c) Pursuant to 40 CFR 63.1107(c), if a Permittee determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in 40 CFR 63.1107(a), or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service.

(d) Pursuant to 40 CFR 63.1107(d), samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment.

DD.6 Compliance with standards and operation and maintenance requirements: [326 IAC 14][40 CFR 63.1108 Subpart YY]

(a) Pursuant to 40 CFR 63.1108(a), the Permittee shall comply with the following requirements.

(1) Except as provided in 40 CFR 63.1108(a)(2), the emission limitations and established parameter ranges of 40 CFR Part 63 shall apply at all times except during periods of startup, shutdown, malfunction, or non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which 40 CFR Part 63, Subpart YY applies. During periods of startup, shutdown, or malfunction, the Permittee shall follow the applicable provisions of the startup, shutdown, malfunction plan required by 40 CFR 63.1111. However, if a startup, shutdown, malfunction or period of non-operation of one portion of an affected source does not affect the ability of a particular emission point to comply with the specific provisions to which it is subject, then that emission point shall still be required to comply with the applicable provisions of 40 CFR Part 63, Subpart YY and

any of the Subparts that are referenced by Subpart YY during startup, shutdown, malfunction, or period of non-operation.

(2) If equipment leak requirements are referenced by 40 CFR Part 63, Subpart YY for a subject source category, such requirements shall apply at all times except during periods of startup, shutdown, or malfunction, process unit shutdown (as defined in 40 CFR 63.1101), or non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which the equipment leak requirements apply.

(3) For batch unit operations, shutdown does not include the normal periods between batch cycles; and startup does not include the recharging of batch unit operations, or the transitional conditions due to changes in product.

(4) [Reserved]

(5) During startups, shutdowns, and malfunctions when the emission standards of 40 CFR Part 63, Subpart YY and the Subparts referenced by Subpart YY do not apply pursuant to 40 CFR 63.1108(a)(1) through 63.1108(a)(3), the Permittee shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions. The measures to be taken shall be identified in the startup, shutdown, and malfunction plan (if applicable), and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the affected source. Back-up control devices are not required, but may be used if available. Compliance with an inadequate startup, shutdown, and malfunction plan developed pursuant to 40 CFR 63.1111 is not a shield for failing to comply with good operation and maintenance requirements.

(6) Malfunctions shall be corrected as soon as practical after their occurrence and/or in accordance with the source's startup, shutdown, and malfunction plan developed as specified under 40 CFR 63.1111.

(7) Operation and maintenance requirements established pursuant to Section 112 of the Clean Air Act are enforceable, independent of emissions limitations or other requirements in relevant standards.

(b) Pursuant to 40 CFR 63.1108(b) the Permittee shall comply with the following compliance assessment procedures.

(1) Parameter monitoring: compliance with operating conditions. Compliance with the required operating conditions for the monitored control devices or recovery devices may be determined by, but is not limited to, the parameter monitoring data for emission points that are required to perform continuous monitoring. For each excursion except for excused excursions (as described in 40 CFR 63.998(b)(6)(ii)), and as provided for in 40 CFR 63.1108(b)(2) the Permittee shall be deemed to have failed to have applied the control in a manner that achieves the required operating conditions.

(2) Parameter monitoring: Excursions. An excursion is not a violation in cases where continuous monitoring is required and the excursion does not count toward the number of excused excursions (as described in 40 CFR 63.998(b)(6)(ii)), if the conditions of 40 CFR 63.1108(b)(2)(i) or 63.1108(b)(2)(ii) are met. Nothing in 40 CFR 63.1108(b)(2) shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of 40 CFR Part 63, Subpart YY or a Subpart referenced by Subpart YY.

(i) During periods of startup, shutdown, or malfunction (and the source is operated during such periods in accordance with the source's startup, shutdown, and malfunction plan as required by 40 CFR 63.1111), or

(ii) During periods of non-operation of the affected source or portion thereof (resulting in cessation of the emissions to which the monitoring applies).

(3) Operation and maintenance procedures. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to IDEM, OAQ. This information may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and

malfunction plan under 40 CFR 63.1111), review of operation and maintenance records, and inspection of the affected source.

(4) Applicability and compliance assessment procedures. Applicability and compliance with standards shall be governed by, in part, but not limited to, the use of data, tests, and requirements according to 40 CFR 63.1108(b)(4)(i) through 63.1108(b)(4)(iii). Compliance with design, equipment, work practice, and operating standards, including those for equipment leaks, shall be determined according to 40 CFR 63.1108(b)(5).

(i) Applicability assessments. Unless otherwise specified in a relevant test method required to assess control applicability, each test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in 40 CFR Part 63, Subpart YY. The arithmetic mean of the results of the three runs shall apply when assessing applicability. Upon receiving approval from IDEM, OAQ, results of a test run may be replaced with results of an additional test run if it meets the criteria specified in 40 CFR 63.1108(b)(4)(i)(A) through 63.1108(b)(4)(i)(D).

(A) A sample is accidentally lost after the testing team leaves the site; or

(B) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or

(C) Extreme meteorological conditions occur;

(D) Other circumstances occur that are beyond the Permittee's control.

(ii) Performance test. IDEM, OAQ may determine compliance with emission limitations of 40 CFR Part 63, Subpart YY based on, but not limited to, the results of performance tests conducted according to the procedures specified in 40 CFR 63.997, unless otherwise specified in 40 CFR Part 63, Subpart YY or a Subpart referenced by Subpart YY.

(iii) Operation and maintenance requirements. IDEM, OAQ may determine compliance with the operation and maintenance standards of 40 CFR Part 63, Subpart YY by, but not limited to, evaluation of the Permittee conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in 40 CFR Part 63, Subpart YY or a Subpart referenced by Subpart YY.

(5) Design, equipment, work practice, or operational standards. IDEM, OAQ may determine compliance with design, equipment, work practice, or operational requirements by, but is not limited to, review of records, inspection of the affected source, and by evaluation of a Permittee's conformance with operation and maintenance requirements as specified in 40 CFR Part 63, Subpart YY or a Subpart referenced by Subpart YY.

(c) [Reserved]

(d) [Reserved]

Recordkeeping and Reporting Requirements

DD.7 Process vents from continuous unit operations: applicability assessment procedures and methods: [326 IAC 14][40 CFR 63.1104 Subpart YY]

(a) [Applicable under DD.4]

(b) [Applicable under DD.4]

(c) [Applicable under DD.4]

(d) [Reserved]

(e) [Applicable under DD.4]

(f) [Applicable under DD.4]

(g) [Applicable under DD.4]

(h) [Applicable under DD.4]

(i) [Applicable under DD.4]

(j) [Applicable under DD.4]

(k) [Applicable under DD.4]

(l) Pursuant to 40 CFR 63.1104(l), applicability assessment recordkeeping requirements.

(1) TRE index value records. The Permittee shall maintain records of measurements, engineering assessments, and calculations performed to determine the TRE index value of the process vent according to the procedures of 40 CFR 63.1104(j), including those records associated with halogen vent stream determination. Documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments, as specified in 40 CFR 63.1104(k). As specified in 40 CFR 63.1104(m), the Permittee shall include this information in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(2) Flow rate records. The Permittee shall record the flow rate as measured using the sampling site and flow rate determination procedures (if applicable) specified in 40 CFR 63.1104(b) and 63.1104(f) or determined through engineering assessment as specified in 40 CFR 63.1104(k). As specified in 40 CFR 63.1104(m), the Permittee shall include this information in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(3) Concentration records. The Permittee shall record the regulated organic HAP or TOC concentration (if applicable) as measured using the sampling site and regulated organic HAP or TOC concentration determination procedures specified in 40 CFR 63.1104(e)(1) and 63.1104(e)(2), or determined through engineering assessment as specified in 40 CFR 63.1104(k). As specified in 40 CFR 63.1104(m), the Permittee shall include this information in the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4).

(4) Process change records. The Permittee shall keep up-to-date, readily accessible records of any process changes that change the control applicability for a process vent. Records are to include any recalculation or measurement of the flow rate, regulated organic HAP or TOC concentration, and TRE index value.

(m) Pursuant to 40 CFR 63.1104(m), applicability assessment reporting requirements.

(1) Notification of Compliance Status. The Permittee shall submit, as part of the Notification of Compliance Status report required by 40 CFR 63.1110(a)(4), the information recorded in 40 CFR 63.1104(l)(1) through 63.1104(l)(3).

(2) Process change.

(i) Whenever a process vent becomes subject to control requirements under 40 CFR Part 63, Subpart YY as a result of a process change, the Permittee shall submit a report within 60 days after the performance test or applicability assessment, whichever is sooner. The report may be submitted as part of the next Periodic Report required by 40 CFR 63.1110(a)(5). The report shall include the information specified in 40 CFR 63.1104(m)(2)(i)(A) through 63.1104(m)(2)(i)(C).

(A) A description of the process change;

(B) The results of the recalculation of the TOC or organic HAP concentration, flow rate, and/or TRE index value required under 40 CFR 63.1104(e), 63.1104(f), and 63.1104(j), and recorded under 40 CFR 63.1104(l); and

(C) A statement that the Permittee will comply with the requirements specified in 40 CFR 63.1103 by the schedules specified in those section for the affected source.

(ii) If a performance test is required as a result of a process change, the Permittee shall specify that the performance test has become necessary due to a process change. This specification shall be made in the performance test notification to IDEM, OAQ, as specified in 40 CFR 63.999(a)(1).

(iii) If a process change does not result in additional applicable requirements, then the Permittee shall include a statement documenting this in the next Periodic Report required by 40 CFR 63.1110(a)(5) after the process change was made.

(n) [Applicable under DD.4]

DD.8 Recordkeeping requirements: [326 IAC 14][40 CFR 63.1109 Subpart YY]

(a) Pursuant to 40 CFR 63.1109(a), the Permittee shall maintain notifications, records, and reports. The Permittee of each affected source subject to 40 CFR Part 63, Subpart YY shall keep copies of notifications, reports and records required by Subpart YY and Subparts referenced by Subpart YY for at least 5 years, unless otherwise specified under 40 CFR Part 63, Subpart YY.

(b) [Reserved]

(c) Pursuant to 40 CFR 63.1109(c), all records required to be maintained by 40 CFR Part 63, Subpart YY or a Subpart referenced by Subpart YY shall be maintained in such a manner that they can be readily accessed and are suitable for inspection. The records of the remaining 3 years, where required, may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, computer disk, magnetic tape, or microfiche.

(d) Pursuant to 40 CFR 63.1109(d), control applicability records; The Permittee shall maintain records containing information developed and used to assess control applicability under 40 CFR 63.1103(d) (e.g., combined total annual emissions of regulated organic HAP).

DD.9 Reporting requirements: [326 IAC 14][40 CFR 63.1110 Subpart YY]

(a) Pursuant to 40 CFR 63.1110(a), required reports; The Permittee of an affected source subject to 40 CFR Part 63, Subpart YY shall submit the reports listed in 40 CFR 63.1110(a)(1) through 63.1110(a)(8), as applicable.

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) Periodic Reports described in 40 CFR 63.1110(e).

(6) Application for approval of construction or reconstruction described in 40 CFR 63.5(d) of Subpart A.

(7) Startup, Shutdown, and Malfunction Reports described in 40 CFR 63.1111.

(8) Other reports. Other reports shall be submitted as specified elsewhere in 40 CFR Part 63, Subpart YY and Subparts referenced by Subpart YY.

(b) [Reserved]

(c) [Reserved]

(d) [Reserved]

(e) Pursuant to 40 CFR 63.1110(e), periodic reports; The Permittee of an affected source subject to monitoring requirements of 40 CFR Part 63, Subpart YY, or to other requirements of Subpart YY or Subparts referenced by 40 CFR Part 63, Subpart YY, where periodic reporting is specified, shall submit a Periodic Report.

(1) Contents. Periodic Reports shall include all information specified in 40 CFR Part 63, Subpart YY and Subparts referenced by Subpart YY.

(2) Due date. The Periodic Report shall be submitted no later than 60 days after the end of each 6-month period.

(3) Overlap with Title V reports. Information required by 40 CFR Part 63, Subpart YY, which is submitted with a Title V periodic report, need not also be included in a subsequent Periodic Report required by 40 CFR Part 63, Subpart YY or Subpart referenced by Subpart YY. The Title V report shall be referenced in the Periodic Report required by 40 CFR Part 63, Subpart YY.

(f) Pursuant to 40 CFR 63.1110(f), general report content; All reports and notifications submitted pursuant to 40 CFR Part 63, Subpart YY, including reports that combine information required under Subpart YY and a Subpart referenced by 40 CFR Part 63, Subpart YY, shall include the information specified in 40 CFR 63.1110(f)(1) through 63.1110(f)(4).

(1) The name, address and telephone number (fax number may also be provided) of the Permittee.

(2) The name, address and telephone number of the person to whom inquiries should be addressed, if different than the Permittee.

(3) The address (physical location) of the reporting facility.

(4) Identification of each affected source covered in the submission and identification of the Subparts (40 CFR Part 63, Subpart YY and the Subparts referenced in Subpart YY) that are applicable to that affected source. Summaries and groupings of this information are permitted.

(g) Pursuant to 40 CFR 63.1110(g), the Permittee shall submit reports and notification in adherence with the following specifications.

(1) Submission to the Environmental Protection Agency. All reports and notifications required under 40 CFR Part 63, Subpart YY shall be sent to the appropriate EPA Regional Office and to IDEM OAQ. The EPA Regional Office may waive the requirement to submit a copy of any reports or notifications at its discretion.

(2) Submission of copies. If IDEM, OAQ requires a notice that contains all the information required in a report or notification listed in 40 CFR Part 63, Subpart YY, a Permittee may send the appropriate EPA Regional Office a copy of the report or notification sent to IDEM OAQ to satisfy the requirements of 40 CFR Part 63, Subpart YY for that report or notification.

(3) Method of submission. Wherever 40 CFR Part 63, Subpart YY specifies “postmark” dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent on or before the specified date.

(4) Submission by electronic media. If acceptable to both the US. EPA, IDEM OAQ, and the Permittee of an affected source, reports may be submitted on electronic media.

(h) [Reserved]

DD.10 Startup, shutdown, and malfunction: [326 IAC 14][40 CFR 63.1111 Subpart YY]

(a) Pursuant to 40 CFR 63.1111(a), startup, shutdown, and malfunction plan will shall meet the following criteria.

(1) Description and purpose of plan. The Permittee of an affected source shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction. This plan shall also include a program of corrective action for malfunctioning process and air pollution control equipment used to comply with relevant standards under 40 CFR Part 63, Subpart YY. The plan shall also address routine or otherwise predictable CPMS malfunctions. This plan shall be developed by the Permittee by the affected source's compliance date under 40 CFR Part 63, Subpart YY. The requirement to develop and implement this plan shall be incorporated into the source's Title V permit. This requirement is optional for equipment that must comply with Subparts TT or UU under 40 CFR Part 63, Subpart YY. It is not optional for equipment equipped with a closed vent system and control device subject to 40 CFR Part 63, Subpart YY and

Part 63, Subpart SS. The purpose of the startup, shutdown, and malfunction plan is described in 40 CFR 63.1111(a)(1)(i) and 63.1111(a)(1)(ii).

(i) To ensure that the Permittee is prepared to correct malfunctions as soon as practical after their occurrence, in order to minimize excess emissions of regulated organic HAP; and

(ii) To reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(2) Operation of source. During periods of startup, shutdown, and malfunction, the Permittee of an affected source subject to 40 CFR Part 63, Subpart YY shall operate and maintain such affected source (including associated air pollution control equipment and CPMS) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under 40 CFR 63.1111(a)(1).

(3) Use of additional procedures. To satisfy the requirements of 40 CFR 63.1111 to develop a startup, shutdown, and malfunction plan, the Permittee of an affected source may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of 40 CFR 63.1111 and are made available for inspection when requested by IDEM, OAQ.

(4) Revisions to the plan. Based on the results of a determination made under 40 CFR 63.1108(b)(3); IDEM, OAQ may require that a Permittee of an affected source make changes to the startup, shutdown, and malfunction plan for that source. IDEM, OAQ may require reasonable revisions to a startup, shutdown, and malfunction plan if IDEM, OAQ finds that the plan is inadequate as specified in 40 CFR 63.1111(a)(4)(i) through 63.1111(a)(4)(iv):

(i) Does not address a startup, shutdown, and malfunction event of the CPMS, the air pollution control equipment, or the affected source that has occurred; or

(ii) Fails to provide for the operation of the affected source (including associated air pollution control equipment and CPMS) during a startup, shutdown, and malfunction event in a manner consistent with good air pollution control practices for minimizing emissions to the extent practical; or

(iii) Does not provide adequate procedures for correcting malfunctioning process and air pollution control equipment as quickly as practicable; or

(iv) Does not provide adequate measures to prevent or minimize excess emissions to the extent practical as specified in 40 CFR 63.1108(a)(5).

(5) Additional malfunction plan requirements. If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the Permittee developed the plan, the Permittee shall revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the affected source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment or CPMS.

(b) Pursuant to 40 CFR 63.1111(b), startup, shutdown, and malfunction reporting shall meet the following requirements.

(1) Periodic startup, shutdown, and malfunction reporting requirements. If actions taken by a Permittee during a startup, shutdown, and malfunction of an affected source, or of a control device or monitoring system required for compliance (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's plan, then the Permittee shall state such information in a startup, shutdown, and malfunction report. During the reporting period, reports shall only be required for startups, shutdowns, and malfunctions during which excess emissions, as defined in 40 CFR 63.1108(a)(5), occur during the reporting period. A startup, shutdown, and malfunction report can be submitted as part of a Periodic Report required under 40 CFR 63.1110(a)(5), or on a more frequent basis if specified otherwise under 40 CFR Part 63,

Subpart YY or a Subpart referenced by Subpart YY or as established otherwise by IDEM, OAQ in the affected source's title V permit. The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate), unless the information is submitted with the Periodic Report. The report shall include the information specified in 40 CFR 63.1111(b)(1)(i) through 63.1111(b)(1)(iv).

(i) The name, title, and signature of the Permittee or other responsible official certifying its accuracy.

(ii) The number of startup, shutdown, and malfunction events and the total duration of all periods of startup, shutdown, and malfunction for the reporting period if the total duration amounts to either of the durations in 40 CFR 63.1111(b)(1)(ii)(A) or 63.1111(b)(1)(ii)(B). Records of the number of CPMS startup, shutdown, and malfunction events and the total duration of all periods of startup, shutdown, and malfunction for the reporting period are required under 40 CFR 63.998(c)(1)(ii)(C) and 63.998(c)(1)(ii)(D).

(A) Total duration of periods of malfunctioning of a CPMS equal to or greater than 5 percent of that CPMS operating time for the reporting period; or

(B) Total duration of periods of startup, shutdown, and malfunction for an affected source equal to or greater than 1 percent of that affected source's operating time for the reporting period.

(iii) Records documenting each startup, shutdown and malfunction event as required under 40 CFR 63.998(c)(1)(ii)(F).

(iv) Records documenting the total duration of operating time as required under 40 CFR 63.998(c)(1)(ii)(H).

(2) Immediate startup, shutdown, and malfunction reports. Notwithstanding the allowance to reduce the frequency of reporting for startup, shutdown, and malfunction reports under 40 CFR 63.1111(b)(1), any time an action taken by a Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) during which excess emissions occur is not consistent with the procedures specified in the affected source's plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, followed by a letter delivered or postmarked within 7 working days after the end of the event. The immediate report required under 40 CFR 63.1111(b)(2) shall contain the name, title, and signature of the Permittee or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred. Notwithstanding the requirements of the previous sentence, after the effective date of an approved permit program in the State in which an affected source is located, the Permittee may make alternative reporting arrangements, in advance, with IDEM, OAQ. Procedures governing the arrangement of alternative reporting requirements under 40 CFR 63.1111(b)(2) are specified in 40 CFR 63.1110(h).

(3) [Reserved]

SECTION EE 40 CFR Part 63, Subpart SS - National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process

Definitions contained in 40 CFR Part 63, Subpart SS, Section 981 are applicable to the Permittee.

Emissions Limitations and Standards

EE.1 Requirements: [326 IAC 14][40 CFR 63.982 Subpart SS]

(a) Pursuant to 40 CFR 63.982(a), the Permittee who is referred to 40 CFR Part 63, Subpart SS for controlling regulated material emissions from storage vessels, process vents, or equipment leaks by venting emissions through a closed vent system to a nonflare control device or routing to a process shall comply with the applicable requirements of 40 CFR 63.982(a)(1) through 63.982(a)(4).

(1) Storage vessels. The Permittee shall comply with the applicable provisions of 40 CFR 63.982(d).

(2) Process vents. The Permittee shall comply with the applicable provisions of 40 CFR 63.982(c)(2), and 63.982(e).

(3) [Reserved]

(4) Equipment leaks. The Permittee shall comply with the applicable provisions of 40 CFR 63.982(c)(3).

(b) [Reserved]

(c) Pursuant to 40 CFR 63.982(c), Permittee who control emissions through a closed vent system to a nonflare control device shall meet the requirements in 40 CFR 63.983 for closed vent systems, the applicable recordkeeping and reporting requirements of 40 CFR 63.998 and 63.999, and the applicable requirements listed below.

(1) [Reserved]

(2) For process vents, the Permittee shall meet the requirements applicable to the control devices being used in 40 CFR 63.990; the applicable general monitoring requirements of 40 CFR 63.996 and the applicable performance test requirements and procedures of 40 CFR 63.997; and the monitoring, recordkeeping and reporting requirements referenced therein. The Permittee subject to halogen reduction device requirements under a referencing subpart must also comply with 40 CFR 63.994 and the monitoring, recordkeeping, and reporting requirements referenced therein. The requirements of 40 CFR 63.984 through 63.986 do not apply to process vents or high throughput transfer racks.

(3) For equipment leaks, the Permittee shall meet the requirements in 40 CFR 63.986 for nonflare control devices used for equipment leak emissions and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of 40 CFR Part 63, Subpart SS shall apply to equipment leak emissions vented through a closed vent system to a nonflare control device.

(d) Pursuant to 40 CFR 63.982(d), the Permittee that routes emissions to a process shall meet the requirements in 40 CFR 63.984, the monitoring, recordkeeping, and reporting requirements referenced therein, and the applicable recordkeeping and reporting requirements of 40 CFR 63.998 and 63.999. No other provisions of 40 CFR Part 63, Subpart SS apply to emissions being routed to a process.

(e) Pursuant to 40 CFR 63.982(e), the Permittee that uses a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements in 40 CFR 63.993 and the monitoring, recordkeeping, and reporting requirements referenced therein that are applicable to the recovery device being used; the applicable monitoring requirements in 40 CFR 63.996 and the recordkeeping and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of 40 CFR 63.998 and 63.999. No other provisions of this subpart apply to process vent emissions routed to a final recovery device.

(f) [Reserved]

EE.2 Closed vent systems: [326 IAC 14][40 CFR 63.983 Subpart SS]

(a) Pursuant to 40 CFR 63.983(a), except for closed vent systems operated and maintained under negative pressure, the provisions of 40 CFR 63.983(a) apply to closed vent systems collecting regulated material from a regulated source.

(1) Collection of emissions. Each closed vent system shall be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device.

(2) Period of operation. Closed vent systems used to comply with the provisions of 40 CFR 63, Subpart SS shall be operated at all times when emissions are vented to, or collected by, them.

(3) Bypass monitoring. Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines, the Permittee shall comply with the provisions of either 40 CFR 63.983(a)(3)(i) or (ii) for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Properly install, maintain, and operate a flow indicator that is capable of taking periodic readings. Records shall be generated as specified in §63.998(d)(1)(ii)(A). The flow indicator shall be installed at the entrance to any bypass line.

(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Records shall be generated as specified in §63.998(d)(1)(ii)(B).

(4) [Reserved]

(5) [Reserved]

(b) Pursuant to 40 CFR 63.982(b), the provisions of 40 CFR 63.982(b) apply to closed vent systems collecting regulated material from a regulated source. Inspection records shall be generated as specified in 40 CFR 63.998(d)(1)(iii) and (iv).

(1) Except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in 40 CFR 63.983(b)(2) and (3), each closed vent system shall be inspected as specified in 40 CFR 63.983(b)(1)(i) or (ii).

(i) If the closed vent system is constructed of hard-piping, the Permittee shall comply with the requirements specified in 40 CFR 63.983(b)(1)(i)(A) and (B).

(A) Conduct an initial inspection according to the procedures in 40 CFR 63.983(c); and

(B) Conduct annual inspections for visible, audible, or olfactory indications of leaks.

(ii) If the closed vent system is constructed of ductwork, the Permittee shall conduct an initial and annual inspection according to the procedures in 40 CFR 63.983(c).

(2) Any parts of the closed vent system that are designated, as described in 40 CFR63.998(d)(1)(i), as unsafe to inspect are exempt from the inspection requirements of 40 CFR 63.983(b)(1) if the conditions of 40 CFR 63.983(b)(2)(i) and (ii) are met.

(i) The Permittee determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with 40 CFR 63.983(b)(1); and

(ii) The Permittee has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.

(3) Any parts of the closed vent system that are designated, as described in 40 CFR 63.998(d)(1)(i), as difficult-to-inspect are exempt from the inspection requirements of 40 CFR 63.983(b)(1) if the provisions of 40 CFR 63.983(b)(3)(i) and (ii) apply.

(i) The Permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and

(ii) The Permittee has a written plan that requires inspection of the equipment at least once every 5 years.

(4) For each bypass line, the Permittee shall comply with 40 CFR 64.983(b)(4)(i) or (ii).

(i) If a flow indicator is used, take a reading at least once every 15 minutes.

(ii) If the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

(c) Pursuant to 40 CFR 63.983(c), the provisions of 40 CFR 63.983(c) apply to closed vent systems collecting regulated material from a regulated source.

(1) Each closed vent system subject to 40 CFR 63.983(c) shall be inspected according to the procedures specified in 40 CFR 63.983(c)(1)(i) through (vii).

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A, except as specified 40 CFR 63.983(c).

(ii) Except as provided in 40 CFR 63.983(c)(1)(iii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 must be for the representative composition of the process fluid and not of each individual VOC in the stream. For process streams that contain nitrogen, air, water, or other inerts that are not organic HAP or VOC, the representative stream response factor must be determined on an inert-free basis. The response factor may be determined at any concentration for which the monitoring for leaks will be conducted.

(iii) If no instrument is available at the plant site that will meet the performance criteria of Method 21 specified in 40 CFR 63.983(c)(1)(ii), the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in 40 CFR 63.983(c)(1)(ii).

(iv) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(v) Calibration gases shall be as specified in 40 CFR 63.983(c)(1)(v)(A) through (C).

(A) Zero air (less than 10 parts per million hydrocarbon in air); and

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in 40 CFR 63.983(c)(1)(ii). In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(C) If the detection instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,500 parts per million.

(vi) The Permittee may elect to adjust or not adjust instrument readings for background. If an owner or operator elects not to adjust readings for background, all such instrument readings shall be compared directly to 500 parts per million to

determine whether there is a leak. If the Permittee elects to adjust instrument readings for background, the Permittee shall measure background concentration using the procedures in this section. The Permittee shall subtract the background reading from the maximum concentration indicated by the instrument.

(vii) If the Permittee elects to adjust for background, the arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining whether there is a leak.

(2) The instrument probe shall be traversed around all potential leak interfaces as described in Method 21 of 40 CFR part 60, appendix A.

(3) Except as provided in 40 CFR 63.983(c)(4), inspections shall be performed when the equipment is in regulated material service, or in use with any other detectable gas or vapor.

(4) [Reserved]

(d) Pursuant to 40 CFR 63.983(d), the provisions of 40 CFR 63.983(d) apply to closed vent systems collecting regulated material from a regulated source.

(1) If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by 40 CFR 63.983(b)(1)(i)(B), the Permittee shall follow the procedure specified in either 40 CFR 63.983(d)(1)(i) or (ii).

(i) The Permittee shall eliminate the leak.

(ii) The Permittee shall monitor the equipment according to the procedures in 40 CFR 63.983(c).

(2) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical, except as provided in 40 CFR 63.983(d)(3). Records shall be generated as specified in 40 CFR 63.998(d)(1)(iii) when a leak is detected.

(i) A first attempt at repair shall be made no later than 5 days after the leak is detected.

(ii) Except as provided in 40 CFR 63.983(d)(3), repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

(3) Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe without a closed vent system shutdown, as defined in 40 CFR 63.981, or if the Permittee determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical, but not later than the end of the next closed vent system shutdown.

EE.3 Fuel gas systems and processes to which storage vessel, transfer rack, or equipment leak regulated material emissions are routed: [326 IAC 14][40 CFR 63.984 Subpart SS]

(a) Pursuant to 40 CFR 63.984(a), equipment and operating requirements for processes shall meet the following specifications.

(1) Except during periods of start-up, shutdown and malfunction as specified in the referencing subpart, the process shall be operating at all times when regulated material emissions are routed to it.

(2) [Reserved]

(b) Pursuant to 40 CFR 63.984(b), the process compliance shall be assessed as follows:

(1) [Reserved]

(2) If emissions are routed to a process, the regulated material in the emissions shall meet one or more of the conditions specified in 40 CFR 63.984(b)(2)(i) through 63.984(b)(2)(iv). The Permittee of storage vessels subject to 40 CFR 63.984(b)(2) shall comply with the compliance demonstration requirements in 40 CFR 63.984(b)(3).

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not regulated materials;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(3) To demonstrate compliance with 40 CFR 63.984(b)(2) for a storage vessel, the Permittee shall prepare a design evaluation (or engineering assessment) that demonstrates the extent to which one or more of the conditions specified in 40 CFR 63.984(b)(2)(i) through 63.984(b)(2)(iv) are being met.

(c) [Reserved]

EE.4 Nonflare control devices used for equipment leaks only:
[326 IAC 14][40 CFR 63.986 Subpart SS]

(a) Pursuant to 40 CFR 63.986(a), nonflare control devices shall meet the following equipment and operating requirements.

(1) The Permittee using a nonflare control device to meet the applicable requirements of a referencing subpart for equipment leaks shall meet the requirements of 40 CFR 63.986.

(2) Control devices used to comply with the provisions of 40 CFR Part 63, Subpart SS shall be operated at all times when emissions are vented to them.

(b) Pursuant to 40 CFR 63.986(b), a performance test is not required for any nonflare control device used only to control emissions from equipment leaks.

(c) Pursuant to 40 CFR 63.986(c), control devices that are used to comply only with the provisions of a referencing subpart for control of equipment leak emissions shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. The Permittee shall maintain the records as specified in 40 CFR 63.998(d)(4).

EE.5 Absorbers, condensers, and carbon adsorbers used as control devices:
[326 IAC 14][40 CFR 63.990 Subpart SS]

(a) Pursuant to 40 CFR 63.990(a), absorbers, shall meet the following equipment and operations requirements:

(1) The Permittee using absorbers, to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of 40 CFR 63.990.

(2) Absorbers, used to comply with the provisions of a referencing subpart and 40 CFR Part 63, Subpart SS shall be operated at all times when emissions are vented to them.

(b) [Applicable under EE.9]

(c) [Reserved because GE uses an alternative monitoring parameter for process vent F-972]

EE.6 Absorbers, condensers, carbon adsorbers and other recovery devices used as final recovery devices: [326 IAC 14][40 CFR 63.993 Subpart SS]

(a) Pursuant to 40 CFR 63.993(a)(1), a Permittee using a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements of this section.

(2) Recovery devices used to comply with the provisions of a referencing subpart and 40 CFR 63, Subpart SS shall be operated at all times when emissions are vented to them.

(b) [Reserved]

(c) Pursuant to 40 CFR 63.993(c), The Permittee shall meet the following recovery device monitoring requirements.

(1) Where an absorber is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, either an organic monitoring device capable of providing a continuous record or a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record, shall be used. If the difference between the specific gravity of the saturated scrubbing fluid and specific gravity of the fresh scrubbing fluid is less than 0.02 specific gravity units, an organic monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in 40 CFR 63.998(b) and 63.998(c), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in 40 CFR 63.996.

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

EE.7 Halogen scrubbers and other halogen reduction devices:
[326 IAC 14][40 CFR 63.994 Subpart SS]

(a) Pursuant to 40 CFR 63.994(a)(1), the Permittee of a halogen scrubber or other halogen reduction device subject to 40 CFR Part 63, Subpart SS shall reduce the overall emissions of hydrogen halides and halogens by the control device performance level specified in a referencing subpart.

(2) Halogen scrubbers and other halogen reduction devices used to comply with the provisions of a referencing subpart and 40 CFR Part 63, Subpart SS shall be operated at all times when emissions are vented to them.

(b) [Applicable under EE.10]

(c) [Reserved because GE uses an alternative monitoring parameter for F-972]

EE.8 General monitoring requirements for control and recovery devices:
[326 IAC 14][40 CFR 63.996 Subpart SS]

(a) [Reserved]

(b) Pursuant to 40 CFR 63.996(b), the Permittee shall conduct monitoring as follows:

(1) Monitoring shall be conducted as set forth in 40 CFR 63.996 and in the relevant sections of 40 CFR Part 63, Subpart SS unless the provision in either 40 CFR 63.996(b)(1)(i) or 63.996(b)(1)(ii) applies.

(i) IDEM, OAQ specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures; or

(ii) IDEM, OAQ approves the use of alternatives to any monitoring requirements or procedures as provided in the referencing subpart 40 CFR 63.996(d).

(2) When one CPMS is used as a backup to another CPMS, the Permittee shall report the results from the CPMS used to meet the monitoring requirements of 40 CFR Part 63, Subpart SS. If both such CPMS's are used during a particular reporting period to meet the monitoring requirements of 40 CFR Part 63, Subpart SS, then the Permittee shall report the results from each CPMS for the time during the six month period that the instrument was relied upon to demonstrate compliance.

(c) Pursuant to 40 CFR 63.996(c), the Permittee shall operate and maintain continuous parameter monitoring systems as follows:

(1) All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(2) The Permittee of a regulated source shall maintain and operate each CPMS as specified in 40 CFR 63.996, or in a relevant subpart, and in a manner consistent with good air pollution control practices.

(i) The Permittee of a regulated source shall ensure the immediate repair or replacement of CPMS parts to correct “routine” or otherwise predictable CPMS malfunctions. The necessary parts for routine repairs of the affected equipment shall be readily available.

(ii) If under the referencing subpart, the Permittee has developed a start-up, shutdown, and malfunction plan, the plan is followed, and the CPMS is repaired immediately, this action shall be recorded as specified in 40 CFR 63.998(c)(1)(ii)(E).

(iii) IDEM, OAQ's determination of whether acceptable operation and maintenance procedures are being used for the CPMS will be based on information that may include, but is not limited to, review of operation and maintenance procedures, operation and maintenance records as specified in 40 CFR 63.998(c)(1)(i) and 63.998(c)(1)(ii), manufacturer's recommendations and specifications, and inspection of the CPMS.

(3) All CPMS's shall be installed and operational, and the data verified as specified in 40 CFR Part 63, Subpart SS either prior to or in conjunction with conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(4) All CPMS's shall be installed such that representative measurements of parameters from the regulated source are obtained.

(5) In accordance with the referencing subpart, except for system breakdowns, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero and span adjustments, all continuous parameter monitoring systems shall be in continuous operation when emissions are being routed to the monitored device.

(6) The Permittee shall establish a range for monitored parameters that indicates proper operation of the control or recovery device. In order to establish the range, the information required in 40 CFR 63.999(b)(3) shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications of 40 CFR 63.997(b)(1) or a prior TRE index value determination, as applicable, or upon existing ranges or limits established under a referencing subpart. Where the regeneration stream flow and carbon bed temperature are monitored, the range shall be in terms of the total regeneration stream flow per regeneration cycle and the temperature of the carbon bed determined within 15 minutes of the completion of the regeneration cooling cycle.

(d) Pursuant to 40 CFR 63.996(d), alternative monitoring requirements are specified below:

(1) Alternatives to the continuous operating parameter monitoring and recordkeeping provisions. The Permittee may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in 40 CFR 63.990(c), 63.994(c), 63.998(a)(2) through 63.998(a)(4), 63.998(c)(2) and 63.998(c)(3), as specified in 63.999(d)(1).

(2) Monitoring a different parameter than those listed. The Permittee may request approval to monitor a different parameter than those established in 40 CFR 63.996(c)(6) or to set unique monitoring parameters if directed by 40 CFR 63.994(c)(2) as specified in 63.999(d)(2).

Compliance Determination Requirements

EE.9 Absorbers, condensers, and carbon adsorbers used as control devices:
[326 IAC 14][40 CFR 63.990 Subpart SS]

(a) [Applicable under EE.5]

(b) Pursuant to 40 CFR 63.990(b), except as specified in 40 CFR 63.997(b), the Permittee shall conduct an initial performance test of any absorber, condenser, or carbon adsorber used as a control device to comply with the provisions of the referencing subpart and 40 CFR Part 63, Subpart SS according to the procedures in 40 CFR 63.997. Performance test records shall be kept as specified in 40 CFR 63.998(a)(2) and a performance test report shall be submitted as specified in 40 CFR 63.999(a)(2). As provided in 40 CFR 63.985(b)(1), a design evaluation may be used as an alternative to the performance test for storage vessels controls. As provided in 40 CFR 63.986(b), no performance test is required to demonstrate compliance for equipment leaks.

(c) [Reserved]

EE.10 Halogen scrubbers and other halogen reduction devices:
[326 IAC 14][40 CFR 63.994 Subpart SS]

(a) [Applicable under EE.7]

(b) Pursuant to 40 CFR 63.994(b), halogen scrubber and other halogen reduction devices shall meet the following performance test requirements:

(1) The Permittee of a combustion device followed by a halogen scrubber or other halogen reduction device to control halogenated vent streams in accordance with a referencing subpart and 40 CFR Part 63, Subpart SS shall conduct an initial performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens according to the procedures in 40 CFR 63.997. Performance test records shall be kept as specified in 40 CFR 63.998(a)(2) and a performance test report shall be submitted as specified in 40 CFR 63.999(a)(2).

(2) The Permittee of a halogen scrubber or other halogen reduction technique used to reduce the vent stream halogen atom mass emission rate prior to a combustion device to comply with a performance level specified in a referencing subpart shall determine the halogen atom mass emission rate prior to the combustion device according to the procedures specified in the referencing subpart. Records of the halogen concentration in the vent stream shall be generated as specified in 40 CFR 63.998(a)(4).

(c) [Reserved]

EE.11 Performance test and compliance assessment requirements for control devices:
[326 IAC 14][40 CFR 63.997 Subpart SS]

(a) Pursuant to 40 CFR 63.997(a), where 40 CFR 63.985 through 63.995 require, or the Permittee elects to conduct, a performance test of a control device or a halogen reduction device, the requirements of 40 CFR 63.997(b) through 63.997(d) apply.

(b) Pursuant to 40 CFR 63.997(b), initial performance tests are required only as specified in 40 CFR Part 63, Subpart SS or a referencing subpart.

(1) Unless requested by IDEM, OAQ, the Permittee is not required to conduct a performance test under 40 CFR Part 63, Subpart SS if a prior performance test was conducted using the same methods specified in 40 CFR 63.997(e) or 63.987(b)(3), as applicable, and either no process changes have been made since the test, or the Permittee can demonstrate that the results of the performance test or compliance demonstration, with or without adjustments, reliably demonstrate compliance despite process changes. The Permittee may request permission to substitute a prior performance test by written application to IDEM, OAQ as specified in 40 CFR 63.999(a)(1)(iv).

(2) Individual performance tests may be waived upon written application to IDEM, OAQ, per 40 CFR 63.999(a)(1)(iii), if, in IDEM, OAQ's judgment, the source is meeting the relevant standard(s) on a continuous basis, the source is being operated under an extension or waiver of compliance, or the Permittee has requested an extension or waiver of compliance and IDEM, OAQ is still considering that request.

(3) Approval of any waiver granted under 40 CFR 63.997 shall not abrogate IDEM, OAQ's authority under the Clean Air Act or in any way prohibit IDEM, OAQ from later canceling the waiver. The cancellation will be made only after notification is given to the Permittee of the source.

(c) Pursuant to 40 CFR 63.997(c), performance tests shall meet the following schedule:

(1) Unless a waiver of performance testing is obtained under 40 CFR 63.997 or the conditions of a referencing subpart, the Permittee shall perform such tests as specified in 40 CFR 63.997(c)(1)(i) through 63.997(c)(1)(vii).

(i) Within 180 days after the effective date of a relevant standard for a new source that has an initial start-up date before the effective date of that standard; or

(ii) Within 180 days after initial start-up for a new source that has an initial start-up date after the effective date of a relevant standard; or

(iii) Within 180 days after the compliance date specified in a referencing subpart for an existing source, or within 180 days after start-up of an existing source if the source begins operation after the effective date of the relevant emission standard; or

(iv) Within 180 days after the compliance date for an existing source subject to an emission standard established pursuant to section 112(f) of the Clean Air Act; or

(v) Within 180 days after the termination date of the source's extension of compliance or a waiver of compliance for an existing source that obtains an extension of compliance under 40 CFR 63.1112(a), or waiver of compliance under 40 CFR 61.11; or

(vi) Within 180 days after the compliance date for a new source, subject to an emission standard established pursuant to section 112(f) of the Clean Air Act, for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Clean Air Act but before the proposal date of the relevant standard established pursuant to section 112(f); or

(vii) When the promulgated emission standard in a referencing subpart is more stringent than the standard that was proposed, the Permittee of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after start-up of the source, whichever is later. If a promulgated standard in a referencing subpart is more stringent than the proposed standard, the Permittee may choose to demonstrate compliance initially with either the proposed or the promulgated standard. If the Permittee chooses to comply with the proposed standard initially, the Permittee shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after start-up of the source, whichever is later, to demonstrate compliance with the promulgated standard.

(2) IDEM, OAQ may require the Permittee to conduct performance tests and compliance assessments at the regulated source at any time when the action is authorized by section 114 of the Clean Air Act.

(3) Unless already permitted by the applicable Title V permit, if the Permittee elects to use a recovery device to replace an existing control device at a later date, or elects to use a different nonflare control device or final recovery device at a later date, the Permittee shall notify IDEM, OAQ, either by amendment of the regulated source's Title V permit. Upon implementing the change, a compliance demonstration or performance test shall be performed according to the provisions of 40 CFR 63.997(c)(3)(i) through 63.997(c)(3)(v), as applicable, within 180 days. The compliance assessment report shall be submitted to IDEM, OAQ within 60 days of completing the determination, as provided in 40 CFR 63.999(a)(1)(ii).

(i) [Reserved]

(ii) [Reserved]

(iii) [Reserved]

(iv) For absorbers, condensers, or carbon adsorbers used to replace an existing control device on a process vent, a performance test shall be performed, using the methods specified in 40 CFR 63.997;

(v) For absorbers, condensers, or carbon adsorbers used to replace an existing final recovery device on a process vent, the Permittee shall comply with the applicable provisions of a referencing subpart and 40 CFR Part 63, Subpart SS;

(d) Pursuant to 40 CFR 63.997(d), if required to do performance testing, the Permittee of each new regulated source and, at the request of IDEM, OAQ, the Permittee of each existing regulated source, shall provide performance testing facilities as specified in 40 CFR 63.997(d)(1) through 63.997(d)(5).

(1) Sampling ports adequate for test methods applicable to such source. This includes, as applicable, the requirements specified in 40 CFR 63.997(d)(1)(i) and 63.997(d)(1)(ii).

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that IDEM, OAQ deems necessary for safe and adequate testing of a source.

(e) Pursuant to 40 CFR 63.997(e), where 40 CFR 63.985 through 63.995 require the Permittee to conduct a performance test of a control device or a halogen reduction device, the Permittee shall follow the requirements of 40 CFR 63.997(e)(1)(i) through 63.997(e)(1)(v), as applicable.

(1) General procedures.

(i) Continuous unit operations. For continuous unit operations, performance tests shall be conducted at maximum representative operating conditions for the process, unless IDEM, OAQ specifies or approves alternate operating conditions. During the performance test, the Permittee may operate the control or halogen reduction device at maximum or minimum representative operating conditions for monitored control or halogen reduction device parameters, whichever results in lower emission reduction. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(ii) [Reserved]

(iii) Combination of both continuous and batch unit operations. For a combination of both continuous and batch unit operations, performance tests shall be conducted at maximum representative operating conditions. For the purpose of conducting a performance test on a combined vent stream, maximum representative operating conditions shall be when batch emission episodes are occurring that result in the highest organic HAP emission rate (for the combined vent stream) that is achievable during the 6-month period that begins 3 months before and ends 3 months after the compliance assessment (e.g. TRE calculation, performance test) without causing any of the situations described in paragraphs 40 CFR 63.997(e)(1)(iii)(A) through 63.997(e)(1)(iii)(C).

(A) Causing damage to equipment;

(B) Necessitating that the Permittee make product that does not meet an existing specification for sale to a customer; or

(C) Necessitating that the Permittee make product in excess of demand.

(iv) Alternatives to performance test requirements. Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in 40 CFR Part 63, Subpart SS, in each relevant standard, and, if required, in applicable appendices of 40 CFR Parts 51, 60, 61, and 63 unless IDEM, OAQ specifies one of the provisions in 40 CFR 63.997(e)(1)(iv)(A) through 63.997(e)(1)(iv)(E).

(A) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology; or

(B) Approves the use of an alternative test method, the results of which IDEM, OAQ has determined to be adequate for indicating whether a specific regulated source is in compliance. The alternate method or data shall be validated using the applicable procedures of Method 301 of Appendix A of 40 CFR Part 63; or

(C) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors; or

(D) Waives the requirement for the performance test as specified in 40 CFR 63.997(b)(2) because the Permittee of a regulated source has demonstrated by other means to IDEM, OAQ's satisfaction that the regulated source is in compliance with the relevant standard; or

(E) Approves the use of an equivalent method.

(v) Performance test runs. Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for at least 1 hour and under the conditions specified in 40 CFR 63.997. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the Permittee's control, compliance may, upon IDEM, OAQ's approval, be determined using the arithmetic mean of the results of the two other runs.

(A) [Reserved]

(B) [Reserved]

(2) Specific procedures. Where 40 CFR 63.985 through 63.995 require the Permittee to conduct a performance test of a control device, or a halogen reduction device, the Permittee shall conduct that performance test using the procedures in 40 CFR 63.997(e)(2)(i) through 63.997(e)(2)(iv), as applicable. The regulated material concentration and percent reduction may be measured as either total organic regulated material or as TOC minus methane and ethane according to the procedures specified.

(i) Selection of sampling sites. Method 1 or 1A of 40 CFR Part 60, Appendix A, as appropriate, shall be used for selection of the sampling sites.

(A) For determination of compliance with a percent reduction requirement of total organic regulated material or TOC, sampling sites shall be located as specified in 40 CFR 63.997(e)(2)(i)(A)(1) and 63.997(e)(2)(i)(A)(2), and at the outlet of the control device.

(1) With the exceptions noted below in 40 CFR 63.997(e)(2)(i)(A)(2) and 63.997(e)(2)(i)(A)(3), the control

device inlet sampling site shall be located at the exit from the unit operation before any control device.

(2) For process vents from continuous unit operations at affected sources in subcategories where the applicability criteria includes a TRE index value, the control device inlet sampling site shall be located after the final recovery device.

(3) [Reserved]

(B) For determination of compliance with a parts per million by volume total regulated material or TOC limit in a referencing subpart, the sampling site shall be located at the outlet of the control device.

(ii) Gas volumetric flow rate. The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR Part 60, Appendix A, as appropriate.

(iii) Total organic regulated material or TOC concentration. To determine compliance with a parts per million by volume total organic regulated material or TOC limit, the Permittee shall use Method 18 or 25A of 40 CFR Part 60, Appendix A, as applicable. The ASTM D6420–99 may be used in lieu of Method 18 of 40 CFR Part 60, Appendix A, under the conditions specified in 40 CFR 63.997(e)(2)(iii)(D)(1) through 63.997(e)(2)(iii)(D)(3). Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of Appendix A of 40 CFR Part 63 may be used. The procedures specified in 40 CFR 63.997(e)(2)(iii)(A), 63.997(e)(2)(iii)(B), 63.997(e)(2)(iii)(D), and 63.997(e)(2)(iii)(E) shall be used to calculate parts per million by volume concentration. The calculated concentration shall be corrected to 3 percent oxygen using the procedures specified in 40 CFR 63.997(e)(2)(iii)(C) if a combustion device is the control device and supplemental combustion air is used to combust the emissions.

(A) Sampling time. For continuous unit operations and for a combination of both continuous and batch unit operations, the minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(B) Concentration calculation. The concentration of either TOC (minus methane or ethane) or total organic regulated material shall be calculated according to 40 CFR 63.997(e)(2)(iii)(B)(1) or 63.997(e)(2)(iii)(B)(2).

(1) The TOC concentration (CTOC) is the sum of the concentrations of the individual components and shall be computed for each run using Equation 2.

$$C_{TOC} = \sum_{i=1}^{x} \frac{\left(\sum_{j=1}^{n} C_{ji} \right)}{x} \qquad [Eq.\ 2]$$

Where:

CTOC = Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

x = Number of samples in the sample run.

n = Number of components in the sample.

Cji = Concentration of sample components j of sample I, dry basis, parts per million by volume.

(2) The total organic regulated material (CREG) shall be computed according to Equation 2 in 40 CFR 63.997(e)(2)(iii)(B)(1) except that only the regulated species shall be summed.

(C) Concentration correction calculation. The concentration of TOC or total organic regulated material, as applicable, shall be corrected to 3 percent oxygen if a combustion device is the control device and supplemental combustion air is used to combust the emissions.

(1) The emission rate correction factor (or excess air), integrated sampling and analysis procedures of Method 3B of 40 CFR Part 60, Appendix A, or American Society of Mechanical Engineers (ASME) PTC 19–10–1981-–Part 10 (available for purchase from: ASME International, Three Park Avenue, New York, NY 10016–5990, 800–843–2763 or 212–591–7722), shall be used to determine the oxygen concentration. The sampling site shall be the same as that of the organic regulated material or organic compound samples, and the samples shall be taken during the same time that the organic regulated material or organic compound samples are taken.

(2) The concentration corrected to 3 percent oxygen (Cc) shall be computed using Equation 3.

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right) \quad [Eq.\ 3]$$

Where:

Cc = Concentration of TOC or organic regulated material corrected to 3 percent oxygen, dry basis, parts per million by volume.

Cm = Concentration of TOC (minus methane and ethane) or organic regulated material, dry basis, parts per million by volume.

%O2d = Concentration of oxygen, dry basis, percentage by volume.

(D) To measure the total organic regulated material concentration at the outlet of a control device, use Method 18 of 40 CFR Part 60, Appendix A, or ASTM D6420–99. If you have a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream using process knowledge or the screening procedure described in Method 18. In conducting the performance test, analyze samples collected at the outlet of the combustion control device as specified in Method 18 or ASTM D6420–99 for the regulated material compounds present at the inlet of the control device. The method ASTM D6420–99 may be used only under the conditions specified in 40 CFR 63.997(e)(2)(iii)(D)(1) through 63.997(e)(2)(iii)(D)(3).

(1) If the target compound(s) is listed in Section 1.1 of ASTM D6420–99 and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

(2) If the target compound(s) is not listed in Section 1.1 of ASTM D6420–99 but is potentially detected by mass spectrometry, an additional system continuing calibration check after each run, as detailed in Section 10.5.3 of ASTM D6420–99, must be followed, met, documented, and submitted with the performance test report even if you do not use a moisture condenser or the compound is not considered soluble.

(3) If a minimum of one sample/analysis cycle is completed at least every 15 minutes.

(E) To measure the TOC concentration, use Method 18 of 40 CFR Part 60, Appendix A, or use Method 25A of 40 CFR Part 60, Appendix A, according to the procedures in 40 CFR 63.997(e)(2)(iii)(E)(1) through 63.997(e)(2)(iii)(E)(4).

(1) Calibrate the instrument on the predominant regulated material compound.

(2) The test results are acceptable if the response from the high level calibration gas is at least 20 times the standard deviation for the response from the zero calibration gas when the instrument is zeroed on its most sensitive scale.

(3) The span value of the analyzer must be less than 100 parts per million by volume.

(4) Report the results as carbon, calculated according to Equation 25A–1 of Method 25A of 40 CFR Part 60, Appendix A.

(iv) Percent reduction calculation. To determine compliance with a percent reduction requirement, the Permittee shall use Method 18, 25, or 25A of 40 CFR Part 60, Appendix A, as applicable. The method ASTM D6420–99 may be used in lieu of Method 18 of 40 CFR Part 60, Appendix A, under the conditions specified in 40 CFR 63.997(e)(2)(iii)(D)(1) through 63.997(e)(2)(iii)(D)(3). Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of Appendix A of 40 CFR Part 63 may be used. The procedures specified in 40 CFR 63.997(e)(2)(iv)(A) through 63.997(e)(2)(iv)(I) shall be used to calculate percent reduction efficiency.

(A) Sampling time. The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(B) Mass rate of TOC or total organic regulated material. The mass rate of either TOC (minus methane and ethane) or total organic regulated material (EI, Eo) shall be computed as applicable.

(1) Equations 4 and 5 shall be used.

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i \qquad [Eq.\ 4]$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o \qquad [Eq.\ 5]$$

Where:

EI, Eo = Emission rate of TOC (minus methane and ethane) (ETOC) or emission rate of total organic regulated material (ERM) in the sample at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

K2 = Constant, 2.494 × 10-6 (parts per million)-1 (gram-mole per standard cubic meter) (kilogram per gram) (minute per

hour), where standard temperature (gram-mole per standard cubic meter) is 20℃.

n = Number of components in the sample.

Cij, Coj = Concentration on a dry basis of organic compound j in parts per million by volume of the gas stream at the inlet and outlet of the control device, respectively. If the TOC emission rate is being calculated, Cij and Coj include all organic compounds measured minus methane and ethane; if the total organic regulated material emissions rate is being calculated, only organic regulated material are included.

Mij, Moj = Molecular weight of organic compound j, gram per gram-mole, of the gas stream at the inlet and outlet of the control device, respectively.

QI, Qo = Process vent flow rate, dry standard cubic meter per minute, at a temperature of 20℃, at the inlet and outlet of the control device, respectively.

(2) [Reserved]

(3) [Reserved]

(C) Percent reduction in TOC or total organic regulated material for continuous unit operations and a combination of both continuous and batch unit operations. For continuous unit operations and for a combination of both continuous and batch unit operations, the percent reduction in TOC (minus methane and ethane) or total organic regulated material shall be calculated using Equation 6.

$$R = \frac{E_i - E_o}{E_i}(100) \qquad [Eq.\ 6]$$

Where:

R = Control efficiency of control device, percent.

EI = Mass rate of TOC (minus methane and ethane) or total organic regulated material at the inlet to the control device as calculated under 40 CFR 63.997(e)(2)(iv)(B), kilograms TOC per hour or kilograms organic regulated material per hour.

Eo = Mass rate of TOC (minus methane and ethane) or total organic regulated material at the outlet of the control device, as calculated under 40 CFR 63.997(e)(2)(iv)(B), kilograms TOC per hour or kilograms total organic regulated material per hour.

(D) [Reserved]

(E) [Reserved]

(F) To measure inlet and outlet concentrations of total organic regulated material, use Method 18 of 40 CFR Part 60, Appendix A, or ASTM D6420–99, under the conditions specified in 40 CFR 63.997(e)(2)(iii)(D)(1) through 63.997(e)(2)(iii)(D)(3). In conducting the performance test, collect and analyze samples as specified in Method 18 or ASTM D6420–99. You must collect samples simultaneously at the inlet and outlet of the control device. If the performance test is for a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream (i.e., uncontrolled emissions) using process knowledge or the screening procedure described in Method 18. Quantify the emissions for the

regulated material compounds present in the inlet gas stream for both the inlet and outlet gas streams for the combustion device.

(G) To determine inlet and outlet concentrations of TOC, use Method 25 of 40 CFR Part 60, Appendix A. Measure the total gaseous non-methane organic (TGNMO) concentration of the inlet and outlet vent streams using the procedures of Method 25. Use the TGNMO concentration in Equations 4 and 5 of 40 CFR 63.997(e)(2)(iv)(B).

(H) Method 25A of 40 CFR Part 60, Appendix A, may be used instead of Method 25 to measure inlet and outlet concentrations of TOC if the condition in either 40 CFR 63.997(e)(2)(iv)(H)(1) or 63.997(e)(2)(iv)(H)(2) is met.

(1) The concentration at the inlet to the control system and the required level of control would result in exhaust TGNMO concentrations of 50 parts per million by volume or less.

(2) Because of the high efficiency of the control device, the anticipated TGNMO concentration of the control device exhaust is 50 parts per million by volume or less, regardless of the inlet concentration.

(I) [Reserved]

Recordkeeping and Reporting Requirements

EE.12 Recordkeeping requirements: [326 IAC 14][40 CFR 63.998 Subpart SS]

(a) Pursuant to 40 CFR 63.998(a), the Permittee shall maintain the following compliance assessment, monitoring, and compliance records.

(1) [Reserved]

(2) Nonflare control device performance test records.

(i) Availability of performance test records. Upon request, the Permittee shall make available to IDEM, OAQ such records as may be necessary to determine the conditions of performance tests performed pursuant to 40 CFR 63.990(b), 63.994(b).

(ii) Nonflare control device and halogen reduction device performance test records.

(A) General requirements. Each Permittee subject to the provisions of 40 CFR Part 63, Subpart SS shall keep up-to-date, readily accessible continuous records of the data specified in 40 CFR 63.998(a)(2)(ii)(B) through 63.998(a)(2)(ii)(C), as applicable, measured during each performance test performed pursuant to 40 CFR 63.990(b), 63.994(b) and also include that data in the Notification of Compliance Status required under 40 CFR 63.999(b). The same data specified in 40 CFR Part 63, Subpart SS shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a combustion device, or the outlet concentration of TOC or regulated material is determined.

(B) [Reserved]

(C) Other nonflare control devices. Where the Permittee seeks to use an absorber, as a control device, the information specified in 40 CFR 63.998(a)(2)(ii)(C)(1) through 63.998(a)(2)(ii)(C)(5) shall be recorded, as applicable.

(1) Where an absorber is used as the control device, the exit specific gravity and average exit temperature of the absorbing liquid averaged over the same time period as the performance test (both measured while the vent stream is normally routed and constituted); or

(2) [Reserved]

(3) [Reserved]

(4) As an alternative to paragraph 40 CFR 63.998(a)(2)(ii)(C)(1), the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, averaged over the same time period as the performance test while the vent stream is normally routed and constituted.

(5) For an absorber, used as a control device, the percent reduction of regulated material achieved by the control device or concentration of regulated material (parts per million by volume, by compound) at the outlet of the control device.

(D) [Reserved]

(3) Recovery device monitoring records during TRE index value determination. For process vents that require control of emissions under a referencing subpart, the Permittee using a recovery device to maintain a TRE above a level specified in the referencing subpart shall maintain the continuous records specified in 40 CFR 63.998(a)(3)(i) through 63.998(a)(3)(v), as applicable, and submit reports as specified in 40 CFR 63.999(a)(2)(iii)(C).

(i) Where an absorber is the final recovery device in the recovery system and the saturated scrubbing fluid and specific gravity of the scrubbing fluid is greater than or equal to 0.02 specific gravity units, the exit specific gravity (or alternative parameter that is a measure of the degree of absorbing liquid saturation if approved by IDEM, OAQ) and average exit temperature of the absorbing liquid averaged over the same time period as the TRE index value determination (both measured while the vent stream is normally routed and constituted); or

(ii) [Reserved]

(iii) [Reserved]

(iv) As an alternative to paragraph 40 CFR 63.998(a)(3)(i), the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, averaged over the same time period as the TRE index value determination while the vent stream is normally routed and constituted.

(v) All measurements and calculations performed to determine the TRE index value of the vent stream as specified in a referencing subpart.

(4) Halogen concentration records. Record the halogen concentration in the vent stream determined according to the procedures specified in a referencing subpart.

(b) Pursuant to 40 CFR 63.998(b), the Permittee shall handle continuous records and monitoring system data as follows:

(1) Continuous records. Where 40 CFR Part 63, Subpart SS requires a continuous record, the Permittee shall maintain a record as specified in 40 CFR 63.998(b)(1)(i) through 63.998(b)(1)(iv), as applicable:

(i) A record of values measured at least once every 15 minutes or each measured value for systems which measure more frequently than once every 15 minutes; or

(ii) A record of block average values for 15-minute or shorter periods calculated from all measured data values during each period or from at least one measured data value per minute if measured more frequently than once per minute.

(iii) Where data is collected from an automated continuous parameter monitoring system, the Permittee may calculate and retain block hourly average values from each 15-minute block average period or from at least one measured value per

minute if measured more frequently than once per minute, and discard all but the most recent three valid hours of continuous (15-minute or shorter) records, if the hourly averages do not exclude periods of CPMS breakdown or malfunction. An automated CPMS records the measured data and calculates the hourly averages through the use of a computerized data acquisition system.

(iv) A record as required by an alternative approved under a referencing subpart.

(2) Excluded data. Monitoring data recorded during periods identified in 40 CFR 63.998(b)(2)(i) through 63.998(b)(2)(iii) shall not be included in any average computed to determine compliance with an emission limit in a referencing subpart.

(i) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

(iii) Start-ups, shutdowns, and malfunctions, if the Permittee follows the applicable provisions of the start-up, shutdown, and malfunction plan required by a referencing subpart and maintains the records specified in 40 CFR 63.998(d)(3).

(3) Records of daily averages. In addition to the records specified in 40 CFR 63.998(a), the Permittee shall keep records as specified in 40 CFR 63.998(b)(3)(i) and 63.998(b)(3)(ii) and submit reports as specified in 40 CFR 63.999(c), unless an alternative recordkeeping system has been requested and approved under a referencing subpart.

(i) Except as specified in 40 CFR 63.998(b)(3)(ii), daily average values of each continuously monitored parameter shall be calculated from data meeting the specifications of 40 CFR 63.998(b)(2) for each operating day and retained for 5 years.

(A) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the period of operation per operating day if operation is not continuous (e.g., for transfer racks the average shall cover periods of loading). If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the daily average instead of all measured values.

(B) The operating day shall be the period defined in the operating permit or in the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(ii) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or in the operating permit, the Permittee may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. In such cases, the Permittee may not discard the recorded values as allowed in 40 CFR 63.998(b)(1)(iii).

(4) [Reserved]

(5) Alternative recordkeeping. For any parameter with respect to any item of equipment associated with a process vent, the Permittee may implement the recordkeeping requirements in 40 CFR 63.998(b)(5)(i) or 63.998(b)(5)(ii) as alternatives to the recordkeeping provisions listed in 40 CFR 63.998(b)(1) through 63.998(b)(3). The Permittee shall retain each record required by 63.998(b)(5)(i) or 63.998(b)(5)(ii) as provided in a referencing subpart.

(i) The Permittee may retain only the daily average value, and is not required to retain more frequently monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of 40 CFR 63.998(b)(5)(i)(A) through 63.998(b)(5)(i)(F) are met. The Permittee shall notify IDEM, OAQ in the Notification of Compliance Status as specified in 40 CFR

63.999(b)(5) or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of 40 CFR 63.998(b)(5)(i), as specified in 40 CFR 63.999(c)(6)(iv).

(A) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, shutdowns or malfunctions (e.g., a temperature reading of -200 °C on a boiler), and will alert the operator by alarm or other means. The Permittee shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(B) The monitoring system generates a running average of the monitoring values, updated at least hourly throughout each operating day, that have been obtained during that operating day, and the capability to observe this average is readily available to IDEM, OAQ on-site during the operating day. The Permittee shall record the occurrence of any period meeting the criteria in 40 CFR 63.998(b)(5)(i)(B)(1) through 63.998(b)(5)(i)(B)(3). All instances in an operating day constitute a single occurrence.

(1) The running average is above the maximum or below the minimum established limits;

(2) The running average is based on at least six one-hour average values; and

(3) The running average reflects a period of operation other than a start-up, shutdown, or malfunction.

(C) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, shutdowns or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The Permittee shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(D) The monitoring system will alert the Permittee by an alarm, if the running average parameter value calculated under 40 CFR 63.998(b)(5)(i)(B) reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(E) The Permittee shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of 40 CFR 63.998(b)(5)(i), at the times specified in 40 CFR 63.998(b)(5)(i)(E)(1) through 63.998(b)(5)(i)(E)(3). The Permittee shall document that the required verifications occurred.

(1) Upon initial installation.

(2) Annually after initial installation.

(3) After any change to the programming or equipment constituting the monitoring system that might reasonably be expected to alter the monitoring system's ability to comply with the requirements of 40 CFR 63.998.

(F) The Permittee shall retain the records identified in 40 CFR 63.998(b)(5)(i)(F)(1) through 63.998(b)(5)(i)(F)(4).

(1) Identification of each parameter, for each item of equipment, for which the Permittee has elected to comply with the requirements of 40 CFR 63.998(b)(5)(i).

(2) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of 40

CFR 63.998(b)(5)(i)(A) through 63.998(b)(5)(i)(E). The description shall identify the location and format (e.g., on-line storage; log entries) for each required record. If the description changes, the Permittee shall retain both the current and the most recent superseded description. The description, and the most recent superseded description, shall be retained as provided in the subpart that references 40 CFR Part 63, Subpart SS, except as provided in 40 CFR 63.998(b)(5)(i)(F)(1).

(3) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of 40 CFR 63.998(b)(5)(i).

(4) The Permittee subject to paragraph 40 CFR 63.998(b)(5)(i)(F)(2) shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. The current description shall be retained on-site at all times or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The Permittee shall retain the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after being superseded. Thereafter, the superseded description may be stored off-site.

(ii) If the Permittee has elected to implement the requirements of 40 CFR 63.998(b)(5)(i), and a period of 6 consecutive months has passed without an excursion as defined in 40 CFR 63.998(b)(6)(i), the Permittee is no longer required to record the daily average value for that parameter for that unit of equipment, for any operating day when the daily average value is less than the maximum, or greater than the minimum established limit. With approval by IDEM, OAQ, monitoring data generated prior to the compliance date of 40 CFR Part 63, Subpart SS shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring were required and/or approved by IDEM, OAQ.

(A) If the Permittee elects not to retain the daily average values, the Permittee shall notify IDEM, OAQ in the next Periodic Report, as specified in 40 CFR 63.999(c)(6)(i). The notification shall identify the parameter and unit of equipment.

(B) If there is an excursion as defined in 40 CFR 63.998(b)(6)(i) on any operating day after the Permittee has ceased recording daily averages as provided in 40 CFR 63.998(b)(5)(ii), the Permittee shall immediately resume retaining the daily average value for each operating day, and shall notify IDEM, OAQ in the next Periodic Report, as specified in 40 CFR 63.999(c). The Permittee shall continue to retain each daily average value until another period of 6 consecutive months has passed without an excursion as defined in 40 CFR 63.998(b)(6)(i).

(C) The Permittee shall retain the records specified in 40 CFR 63.998(b)(5)(i)(A) through 63.998(b)(5)(i)(F) for the duration specified in a referencing subpart. For any week, if compliance with 40 CFR 63.998(b)(5)(i)(A) through 63.998(b)(5)(i)(D) does not result in retention of a record of at least one occurrence or measured parameter value, the Permittee shall record and retain at least one parameter value during a period of operation other than a start-up, shutdown, or malfunction.

(6) (i) For the purposes of 40 CFR 63.998, an excursion means that the daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in 40 CFR 63.998(b)(6)(i)(A) and 63.998(b)(6)(i)(B).

(A) The daily average value during any start-up, shutdown or malfunction shall not be considered an excursion if the Permittee follows the applicable provisions of the start-up, shutdown, and malfunction plan required by a referencing subpart and maintains the records specified in 40 CFR 63.998(d)(3).

(B) An excused excursion, as described in 40 CFR 63.998(b)(6)(ii), does not count toward the number of excursions for the purposes of 40 CFR Part 63, Subpart SS.

(ii) One excused excursion for each control device or recovery device for each semiannual period is allowed. If a source has developed a start-up, shutdown and malfunction plan, and a monitored parameter is outside its established range or monitoring data are not collected during periods of start-up, shutdown, or malfunction (and the source is operated during such periods in accordance with the start-up, shutdown, and malfunction plan) or during periods of nonoperation of the process unit or portion thereof (resulting in cessation of the emissions to which monitoring applies), then the excursion is not a violation and, in cases where continuous monitoring is required, the excursion does not count as the excused excursion for determining compliance.

(c) Pursuant to 40 CFR 63.998(c), The Permittee shall maintain the following source monitoring records for nonflare control and recovery devices.

(1) Monitoring system records. For process vents the Permittee subject to 40 CFR Part 63, Subpart SS shall keep the records specified in 40 CFR 63.998(c)(1), as well as records specified elsewhere in 40 CFR Part 63, Subpart SS.

(i) For a CPMS used to comply with 40 CFR, Part 63, a record of the procedure used for calibrating the CPMS.

(ii) For a CPMS used to comply with 40 CFR Part 63, Subpart SS, records of the information specified in 40 CFR 63.998(c)(ii)(A) through 63.998(c)(ii)(H), as indicated in a referencing subpart.

(A) The date and time of completion of calibration and preventive maintenance of the CPMS.

(B) The “as found” and “as left” CPMS readings, whenever an adjustment is made that affects the CPMS reading and a “no adjustment” statement otherwise.

(C) The start time and duration or start and stop times of any periods when the CPMS is inoperative.

(D) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with 40 CFR Part 63, Subpart SS during which excess emissions (as defined in a referencing subpart) occur.

(E) For each start-up, shutdown, and malfunction during which excess emissions as defined in a referencing subpart occur, records whether the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. These records may take the form of a “checklist,” or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(F) Records documenting each start-up, shutdown, and malfunction event.

(G) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event, as applicable.

(H) Records of the total duration of operating time.

(2) Combustion control and halogen reduction device monitoring records.

(i) Each Permittee using a halogen reduction device to comply with 40 CFR Part 63, Subpart SS shall keep the following records up-to-date and readily accessible, as applicable. Continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.994(c) (halogen reduction device monitoring),or approved by IDEM, OAQ in accordance with a referencing subpart.

(ii) Each Permittee shall keep records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.998(b)(3)(i).

(iii) Each Permittee subject to the provisions of 40 CFR Part 63, Subpart SS shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are established pursuant to 40 CFR 63.996(c)(6).

(3) Monitoring records for recovery devices, absorbers, condensers, carbon adsorbers or other noncombustion systems used as control devices.

(i) Each Permittee using a recovery device to achieve and maintain a TRE index value greater than the control applicability level specified in the referencing subpart but less than 4.0 or using an absorber as a control device shall keep readily accessible, continuous records of the equipment operating parameters specified to be monitored under 40 CFR 63.990(c) (absorber, condenser, and carbon adsorber monitoring), 63.993(c) (recovery device monitoring), or as approved by IDEM, OAQ in accordance with a referencing subpart.

(ii) Each Permittee shall keep records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.998(b)(3)(i).

(iii) Each Permittee subject to the provisions of 40 CFR Part 63, Subpart SS shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are established pursuant to 40 CFR 63.996(c)(6).

(d) Pursuant to 40 CFR 63.998(d), the Permittee shall maintain the following other records.

(1) Closed vent system records. For closed vent systems the Permittee shall record the information specified in 40 CFR 63.998(d)(1)(i) through 63.998(d)(1)(iv), as applicable.

(i) For closed vent systems collecting regulated material from a regulated source, the Permittee shall record the identification of all parts of the closed vent system, that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR 63.983(b)(2)(ii) or 63.983(b)(2)(iii).

(ii) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the Permittee shall keep a record of the information specified in either 40 CFR 63.998(d)(1)(ii)(A) or 63.998(d)(1)(ii)(B), as applicable.

(A) Hourly records of whether the flow indicator specified under 40 CFR 63.983(a)(3)(i) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(B) Where a seal mechanism is used to comply with 40 CFR 63.983(a)(3)(ii), hourly records of flow are not required. In such cases, the Permittee shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve

position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(iii) For a closed vent system collecting regulated material from a regulated source, when a leak is detected as specified in 40 CFR 63.983(d)(2), the information specified in 40 CFR 63.998(d)(1)(iii)(A) through 63.998(d)(1)(iii)(F) shall be recorded and kept for 5 years.

(A) The instrument and the equipment identification number and the operator name, initials, or identification number.

(B) The date the leak was detected and the date of the first attempt to repair the leak.

(C) The date of successful repair of the leak.

(D) The maximum instrument reading measured by the procedures in 40 CFR 63.983(c) after the leak is successfully repaired or determined to be nonrepairable.

(E) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The Permittee may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(F) Copies of the Periodic Reports as specified in 40 CFR 63.999(c), if records are not maintained on a computerized database capable of generating summary reports from the records.

(iv) For each instrumental or visual inspection conducted in accordance with 40 CFR 63.983(b)(1) for closed vent systems collecting regulated material from a regulated source during which no leaks are detected, the Permittee shall record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(2) [Reserved]

(3) Regulated source and control equipment start-up, shutdown and malfunction records.

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment used to comply with 40 CFR, Part 63 during which excess emissions (as defined in a referencing subpart) occur.

(ii) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing control device emissions to a backup control device (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed. These records may take the form of a “checklist,” or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(4) Equipment leak records. The Permittee shall maintain records of the information specified in 40 CFR 63.998(d)(4)(i) and 63.998(d)(4)(ii) for closed vent systems and control devices if specified by the equipment leak provisions in a referencing subpart. The records specified in 40 CFR 63.998(d)(4)(i) shall be retained for the life of the equipment. The records specified in 40 CFR 63.998(d)(4)(ii) shall be retained for 5 years.

(i) The design specifications and performance demonstrations specified in 40 CFR 63.998(d)(4)(i)(A) through 63.998(d)(4)(i)(C).

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(B) The dates and descriptions of any changes in the design specifications.

(C) A description of the parameter or parameters monitored, as required in a referencing subpart, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(ii) Records of operation of closed vent systems and control devices, as specified in 40 CFR 63.998(d)(4)(ii)(A) through 63.998(d)(4)(ii)(C).

(A) Dates and durations when the closed vent systems and control devices required are not operated as designed as indicated by the monitored parameters.

(B) Dates and durations during which the monitoring system or monitoring device is inoperative.

(C) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR Part 63, Subpart SS.

(5) Records of monitored parameters outside of range. The Permittee shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Periodic Report.

EE.13 Notifications and other reports: [326 IAC 14][40 CFR 63.999 Subpart SS]

(a) Pursuant to 40 CFR 63.999(a), the Permittee shall submit notifications and reports of performance tests.

(1) General requirements. General requirements for performance test notifications and reports are specified in 40 CFR 63.999(a)(1)(i) through 63.999(a)(1)(iii).

(i) The Permittee shall notify IDEM, OAQ of the intention to conduct a performance test at least 30 days before such a compliance demonstration is scheduled to allow IDEM, OAQ the opportunity to have an observer present. If after 30 days notice for such an initially scheduled compliance demonstration, there is a delay (due to operational problems, etc.) in conducting the scheduled compliance demonstration, the Permittee of an affected facility shall notify IDEM, OAQ as soon as possible of any delay in the original demonstration date. The Permittee shall provide at least 7 days prior notice of the rescheduled date of the compliance demonstration, or arrange a rescheduled date with IDEM, OAQ by mutual agreement.

(ii) Unless specified differently in 40 CFR Part 63, Subpart SS or a referencing subpart, performance test reports, not submitted as part of a Notification of Compliance Status report, shall be submitted to IDEM, OAQ within 60 days of completing the test or determination.

(iii) Any application for a waiver of an initial performance test as allowed by 40 CFR 63.997(b)(2), shall be submitted no later than 90 days before the performance test or compliance assessment is required. The application for a waiver shall include information justifying the Permittee's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the test.

(iv) Any application to substitute a prior performance test for an initial performance test, as allowed by 40 CFR 63.997(b)(1), shall be submitted no later than 90 days before the performance test is required. The application for substitution shall include information demonstrating that the prior performance test or compliance assessment was conducted using the same methods specified in 40 CFR 63.997(e), as applicable. The application shall also include information demonstrating that no process changes have been made since the test, or that

the results of the performance test reliably demonstrate compliance despite process changes.

(2) Performance test report submittal and content requirements. Performance test reports shall be submitted as specified in 40 CFR 63.999(a)(2)(i) through 63.999(a)(2)(iii).

(i) For performance tests, the Notification of Compliance Status or performance test report shall include one complete test report as specified in 40 CFR 63.999(a)(2)(ii) for each test method used for a particular kind of emission point and other applicable information specified in 40 CFR 63.999(a)(2)(iii). For additional tests performed for the same kind of emission point using the same method, the results and any other information required in applicable sections of 40 CFR Part 63, Subpart SS shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(iii) The performance test report shall also include the information specified in 40 CFR 63.999(a)(2)(iii)(A) through 63.999(a)(2)(iii)(C), as applicable.

(A) [Reserved]

(B) For nonflare control device and halogen reduction device performance tests as required under 40 CFR 63.990(b), 63.994(b) also submit the records specified in 40 CFR 63.998(a)(2)(ii), as applicable.

(C) For recovery devices also submit the records specified in 40 CFR 63.998(a)(3), as applicable.

(b) Pursuant to 40 CFR 63.999(b), the Permittee will submit the following notifications of compliance status.

(1) Routing storage vessel or transfer rack emissions to a process or fuel gas system. The Permittee who elects to comply with 40 CFR 63.982 by routing emissions from a storage vessel to a process as specified in 40 CFR 63.984, shall submit as part of the Notification of Compliance Status the information specified in 40 CFR 63.999(b)(1)(i) and 63.999(b)(1)(ii), or 63.999(b)(1)(iii), as applicable.

(i) If storage vessels emissions are routed to a process, the Permittee shall submit the information specified in 40 CFR 63.984(b)(2) and 40 CFR 63.984(b)(3).

(ii) [Reserved]

(iii) [Reserved]

(2) [Reserved]

(3) Operating range for monitored parameters. The Permittee shall submit as part of the Notification of Compliance Status, the operating range for each monitoring parameter identified for each control, recovery, or halogen reduction device as determined pursuant to 40 CFR 63.996(c)(6). The specified operating range shall represent the conditions for which the control, recovery, or halogen reduction device is being properly operated and maintained. This report shall include the information in 40 CFR 63.999(b)(3)(i) through 63.999(b)(3)(iii), as applicable, unless the range and the operating day have been established in the operating permit.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description

of why the range indicates proper operation of the control, recovery, or halogen reduction device, as specified in 40 CFR 63.999(b)(3)(ii)(A), 63.999(b)(3)(ii)(B), or 63.999(b)(3)(ii)(C), as applicable.

(A) If a performance test or TRE index value determination is required by a referencing subpart for a control, recovery or halogen reduction device, the range shall be based on the parameter values measured during the TRE index value determination or performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. TRE index value determinations and performance testing are not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test or TRE index value determination is not required by a referencing subpart for a control, recovery, or halogen reduction device, the range may be based solely on engineering assessments and/or manufacturer's recommendations.

(C) The range may be based on ranges or limits previously established under a referencing subpart.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(4) Halogen reduction device. The Permittee shall submit as part of the Notification of Compliance Status the information recorded pursuant to 40 CFR 63.998(a)(4).

(5) Alternative recordkeeping. The Permittee shall notify IDEM, OAQ in the Notification of Compliance Status if the alternative recordkeeping requirements of 40 CFR 63.998(b)(5) are being implemented. If the Notification of Compliance Status has already been submitted, the notification must be in the periodic report submitted immediately preceding implementation of the alternative, as specified in 40 CFR 63.999(c)(6)(iv).

(c) Pursuant to 40 CFR 63.999(c), the Permittee shall submit the following periodic reports.

(1) Periodic reports shall include the reporting period dates, the total source operating time for the reporting period, and, as applicable, all information specified in 40 CFR 63.999 and in the referencing subpart, including reports of periods when monitored parameters are outside their established ranges.

(2) For closed vent systems subject to the requirements of 40 CFR 63.983, the Permittee shall submit as part of the periodic report the information specified in 40 CFR 63.999(c)(2)(i) through 63.999(c)(2)(iii), as applicable.

(i) The information recorded in 40 CFR 63.998(d)(1)(iii)(B) through 63.998(d)(1)(iii)(E);

(ii) Reports of the times of all periods recorded under 40 CFR 63.998(d)(1)(ii)(A) when the vent stream is diverted from the control device through a bypass line; and

(iii) Reports of all times recorded under 40 CFR 63.998(d)(1)(ii)(B) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

(3) [Reserved]

(4) [Reserved]

(5) If a control device other than a flare is used to control emissions from storage vessels, the periodic report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status in accordance with 40 CFR 63.999(b)(3). The description shall include the information specified in 40 CFR 63.999(c)(5)(i) and 63.999(c)(5)(ii).

(i) Identification of the control device for which the measured parameters were outside of the established ranges, and

(ii) The cause for the measured parameters to be outside of the established ranges.

(6) For process vents, periodic reports shall include the information specified in 40 CFR 63.999(c)(6)(i) through 63.999(c)(6)(iv).

(i) Periodic reports shall include the daily average values of monitored parameters, calculated as specified in 40 CFR 63.998(b)(3)(i) for any days when the daily average value is outside the bounds as defined in 40 CFR 63.998(c)(2)(iii) or 63.998(c)(3)(iii), or the data availability requirements defined in 40 CFR 63.999(c)(6)(i)(A) through 63.999(c)(6)(i)(D) are not met, whether these excursions are excused or unexcused excursions. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified. An excursion means any of the cases listed in 40 CFR 63.999(c)(6)(i)(A) through 63.999(c)(6)(i)(C). If the Permittee elects not to retain the daily average values pursuant to 40 CFR 63.998(b)(5)(ii)(A), the Permittee shall report this in the Periodic Report.

(A) When the daily average value of one or more monitored parameters is outside the permitted range.

(B) When the period of control or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(C) When the period of control or recovery device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(D) Monitoring data are insufficient to constitute a valid hour of data as used in 40 CFR 63.999(c)(6)(i)(B) and 63.999(c)(6)(i)(C), if measured values are unavailable for any of the 15-minute periods within the hour.

(ii) [Reserved]

(iii) If continuous records are required, the Permittee shall specify in the monitoring plan whether the provisions of 40 CFR 63.999(c)(6)(i) and 63.999(c)(6)(ii) apply.

(iv) If the Permittee has chosen to use the alternative recordkeeping requirements of 40 CFR 63.998(b)(5), and has not notified IDEM, OAQ in the Notification of Compliance Status that the alternative recordkeeping provisions are being implemented as specified in 40 CFR 63.998(b)(5), the Permittee shall notify IDEM, OAQ in the Periodic Report submitted immediately preceding implementation of the alternative. The notifications specified in 40 CFR 63.998(b)(5)(ii) shall be included in the next Periodic Report following the identified event.

(7) [Reserved]

(d) Pursuant to 40 CFR 63.999(d) the Permittee shall request approval for monitoring alternatives.

(1) Alternatives to the continuous operating parameter monitoring and recordkeeping provisions. Requests for approval to use alternatives to continuous operating parameter monitoring and recordkeeping provisions, as provided for in 40 CFR 63.996(d)(1), shall be submitted as specified in a referencing subpart, and the referencing subpart will govern the review and approval of such requests. The information specified in paragraphs 40 CFR 63.999(d)(1)(i) and 63.999(d)(1)(ii) shall be included.

(i) A description of the proposed alternative system; and

(ii) Information justifying the Permittee's request for an alternative method, such as the technical or economic infeasibility, or the impracticality, of the regulated source using the required method.

(2) Monitoring a different parameter than those listed. Requests for approval to monitor a different parameter than those established in 40 CFR 63.996(c)(6) or to set unique monitoring parameters, as provided for in 40 CFR 63.996(d)(2), shall be submitted as specified as specified in a referencing subpart, and the referencing subpart will govern the review and approval of such requests. The information specified in 40 CFR 63.999(d)(2)(i) through 63.999(d)(2)(iii) shall be included in the request.

(i) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s);

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the Permittee will establish a range for the monitored parameter(s) as part of the Notification of Compliance Status if required under a referencing subpart, unless this information has already been submitted; and

(iii) The frequency and content of monitoring, recording, and reporting, if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter value is outside the established range will not be included in periodic reports under 40 CFR 63.999(c). The rationale for the proposed monitoring, recording, and reporting system shall be included.

SECTION FF 40 CFR 61, Subpart FF National Emission Standard for Benzene Waste Operations

Definitions contained in 40 CFR Part 61, Subpart FF, Section 341 are applicable to the Permittee.

Emission Limitations and Standards [326 IAC 2 7 5 (1)]

FF.1 Standards Required by 40 CFR 61, Subpart FF [326 IAC 14] [40 CFR 61.342]

(a) Pursuant to 40 CFR 61.342(a), the Permittee of a facility at which the total annual benzene quantity from facility waste is less than 10 megagrams per year (Mg/yr) (11 ton/yr) shall be exempt from the requirements of 40 CFR 61.342(b) and 61.342(c). The total annual benzene quantity from facility waste is the sum of the annual benzene quantity for each waste stream at the facility that has a flow weighted annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10 percent. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream. Other specific requirements for calculating the total annual benzene waste quantity are as follows:

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) The total annual benzene quantity is determined based upon the quantity of benzene in the waste before any waste treatment occurs to remove the benzene except as specified in 40 CFR 61.355(c)(1)(i)(A) through 61.355(c)(1)(i)(C).

(b) [Reserved]

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) Pursuant to 40 CFR 61.342(g), compliance with 40 CFR Part 61, Subpart FF will be determined by review of the Permittee's records and results from tests and inspections using methods and procedures specified in 40 CFR 61.355.

(h) [Reserved]

Compliance Determination Requirements

FF.2 Test Methods, Procedures and Compliance Provisions for 40 CFR 61, Subpart FF [326 IAC 14] [40 CFR 61.355]

(a) Pursuant to 40 CFR 61.355(a), the Permittee shall determine the total annual benzene quantity from facility waste by the following procedure:

(1) For each waste stream subject to 40 CFR Part 61, Subpart FF having a flow weighted annual average water content greater than 10 percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10 percent as specified in 40 CFR 61.342(a), the Permittee shall:

(i) Determine the annual waste benzene waste quantity for each waste stream using the procedures specified in 40 CFR 61.355.

(ii) Determine the flow weighted annual average benzene concentration for each waste stream using the procedures specified in 40 CFR 61.355(c).

(iii) Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow weighted annual average benzene concentration.

(2) Total annual benzene quantity from facility waste is calculated by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to 40 CFR 61.355(b)(4).

(3) [Reserved]

(4) If the total annual benzene quantity from facility waste is less than 11 ton/yr but is equal to or greater than 1.1 ton/yr, then the Permittee shall:

(i) Comply with the recordkeeping requirements in 40 CFR 61.356 and reporting requirements in 40 CFR 61.357; and

(ii) Repeat the determination of total annual benzene quantity from facility waste at least once per year and whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from facility waste to increase to 11 ton/yr or more.

(5) If the total annual benzene quantity from facility waste is less than 1.1 ton/yr, then the Permittee shall:

(i) Comply with the recordkeeping requirements in 40 CFR 61.356 and reporting requirements in 40 CFR 61.357.

(ii) Repeat the determination of total annual benzene quantity from facility waste whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from facility waste to increase to 1.1 ton/yr or more.

(6) [Reserved]

(b) Pursuant to 40 CFR 61.355(b) and for purposes of the calculation required by 40 CFR 61.355(a), the Permittee shall determine the annual waste quantity at the point of waste generation, by one of the following methods:

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) The determination of annual waste quantity for each process unit turnaround waste generated only at 2 year or greater intervals, may be made by dividing the total quantity of waste generated during the most recent process unit turnaround by the time period (in the nearest tenth of a year) between the turnaround resulting in generation of the waste and the most recent preceding process turnaround for the unit. The resulting annual waste quantity shall be included in the calculation of the annual benzene quantity as provided in 40 CFR 61.355(a)(1)(iii) for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround. For estimates of total annual benzene quantity as specified in the 90 day report, required under 40 CFR 61.357(a)(1), the Permittee shall estimate the waste quantity generated during the most recent turnaround, and the time period between turnarounds in accordance with good engineering practices. If the Permittee chooses not to annualize process unit turnaround waste, as specified in 40 CFR 61.355(b)(4), then the process unit turnaround waste quantity shall be included in the calculation of the annual benzene quantity for the year in which the turnaround occurs.

(5) Select the highest annual quantity of waste managed from historical records representing the most recent 5 years of operation;

(6) Use the maximum design capacity of the waste management unit; or

(7) Use measurements that are representative of maximum waste generation rates;

(c) Pursuant to 40 CFR 61.355(c) and for the purposes of the calculation required by 40 CFR 61.355(a), the Permittee shall determine the flow weighted annual average benzene concentration

in a manner that meets the requirements given in 40 CFR 61.355(c)(1) using either of the methods given in 40 CFR 61.355(c)(2) and 40 CFR 61.355(c)(3):

(1) The determination of flow weighted annual average benzene concentration shall meet all of the following criteria:

(i) The determination shall be made at the point of waste generation except for the specific cases given in 40 CFR 61.355(c)(1)(i)(A) through 61.355(c)(1)(i)(D).

(A) [Reserved]

(B) [Reserved]

(C) [Reserved]

(D) The determination of flow weighted annual average benzene concentration for process unit turnaround waste shall be made using either of the methods given in 40 CFR 61.355(c)(2) or 61.355(c)(3). The resulting flow weighted annual average benzene concentration shall be included in the calculation of annual benzene quantity as provided in 40 CFR 61.355(a)(1)(iii) for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.

(ii) Volatilization of the benzene by exposure to air shall not be used in the determination to reduce the benzene concentration.

(iii) Mixing or diluting the waste stream with other wastes or other materials shall not be used in the determination to reduce the benzene concentration.

(iv) The determination shall be made prior to any treatment of the waste that removes benzene.

(v) For wastes with multiple phases, the determination shall provide the weighted average benzene concentration based on the benzene concentration in each phase of the waste and the relative proportion of the phases.

(2) Knowledge of the waste. The Permittee shall provide sufficient information to document the flow weighted annual average benzene concentration of each waste stream. Examples of information that could constitute knowledge include material balances, records of chemicals purchases, or previous test results provided the results are still relevant to the current waste stream conditions. If test data are used, then the Permittee shall provide documentation describing the testing protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the flow weighted annual average benzene concentration for the waste stream. When the Permittee and IDEM, OAQ do not agree on determinations of the flow weighted annual average benzene concentration based on knowledge of the waste, the procedures under 40 CFR 61.355(c)(3) shall be used to resolve the disagreement.

(3) Measurements of the benzene concentration in the waste stream in accordance with the following procedures:

(i) The Permittee shall collect a minimum of three representative samples from each waste stream. Where feasible, samples shall be taken from an enclosed pipe prior to the waste being exposed to the atmosphere.

(ii) For waste in enclosed pipes, the following procedures shall be used:

(A) Samples shall be collected prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling.

(B) A static mixer shall be installed in the process line or in a by pass line unless the Permittee demonstrates that installation of a static mixer in the line is not necessary to accurately determine the benzene concentration of the waste stream.

(C) The sampling tap shall be located within two pipe diameters of the static mixer outlet.

(D) Prior to the initiation of sampling, sample lines and cooling coil shall be purged with at least four volumes of waste.

(E) After purging, the sample flow shall be directed to a sample container and the tip of the sampling tube shall be kept below the surface of the waste during sampling to minimize contact with the atmosphere.

(F) Samples shall be collected at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10^0 C (50^0 F).

(G) After filling, the sample container shall be capped immediately (within 5 seconds) to leave a minimum headspace in the container.

(H) The sample containers shall immediately be cooled and maintained at a temperature below 10^0 C (50^0 F) for transfer to the laboratory.

(iii) When sampling from an enclosed pipe is not feasible, a minimum of three representative samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of benzene prior to sampling.

(iv) Each waste sample shall be analyzed using one of the following test methods for determining the benzene concentration in a waste stream:

(A) Method 8020, Aromatic Volatile Organics, in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW 846 (incorporation by reference as specified in 40 CFR 61.18 of 40 CFR Part 61);

(B) Method 8021, Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW 846 (incorporation by reference as specified in 40 CFR 61.18 of 40 CFR Part 61);

(C) Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW 846 (incorporation by reference as specified in §61.18 of 40 CFR Part 61);

(D) Method 8260, Gas Chromatography/Mass Spectrometry for Volatile Organics: Capillary Column Technique in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW 846 (incorporation by reference as specified in §61.18 of 40 CFR Part 61);

(E) Method 602, Purgeable Aromatics, as described in 40 CFR Part 136, Appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA methods; or

(F) Method 624, Purgeables, as described in 40 CFR Part 136, Appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA method.

(v) The flow weighted annual average benzene concentration shall be calculated by averaging the results of the sample analyses as follows:

$$\bar{C} = \frac{1}{Q_t} \times \sum_{i=1}^{N} (Q_i)(C_i)$$

Where:

C = Flow weighted annual average benzene concentration for waste stream, ppmw.
Qt = Total annual waste quantity for waste stream, kg/yr (lb/yr).
N = Number of waste samples (at least 3).
Qi = Annual waste quantity for waste stream represented by Ci, kg/yr (lb/yr).
Ci = Measured concentration of benzene in waste sample i, ppmw.

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) [Reserved]

(i) [Reserved]

(j) [Reserved]

(k) [Reserved]

Recordkeeping and Reporting Requirements [326 IAC 2 7 5(3)] [326 IAC 2 7 19]

FF.3 Recordkeeping Requirements for 40 CFR 61, Subpart FF [325 IAC 14] [40 CFR 61.356]

(a) The Permittee of a facility subject to 40 CFR 61, Subpart FF shall comply with the recordkeeping requirements in 40 CFR 61.356. Each record shall be maintained in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified.

(b) Pursuant to 40 CFR 61.356(b), the Permittee shall maintain records that identify each waste stream at the facility subject to 40 CFR 61, Subpart FF, and indicate whether or not the waste stream is controlled for benzene emissions in accordance with 40 CFR Part 61, Subpart FF.

(1) For each waste stream not controlled for benzene emissions, the records shall include all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow weighted benzene concentration, and annual benzene quantity.

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) For each facility where the annual waste quantity for process unit turnaround waste is determined in accordance with 40 CFR 61.355(b)(5), the records shall include all test results, measurements, calculations, and other documentation used to determine the following information: identification of each process unit at the facility that undergoes turnarounds, the date of the most recent turnaround for each process unit, identification of each process unit turnaround waste, the water content of each process unit turnaround waste, the annual waste quantity determined in accordance with 40 CFR 61.355(b)(5), the range of benzene concentrations in the waste, the annual average flow weighted benzene concentration of the waste, and the annual benzene quantity calculated in accordance with 40 CFR 61.355(a)(1)(iii).

(6) [Reserved]

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) [Reserved]

(i) [Reserved]

(j) [Reserved]

(k) [Reserved]

(l) [Reserved]

(m) [Reserved]

(n) [Reserved]

FF.4 Reporting Requirements for 40 CFR 61, Subpart FF [326 IAC 14] [40 CFR 61.357]

(a) Pursuant to 40 CFR 61.357(a), the Permittee of a chemical plant, petroleum refinery, coke by product recovery plant, and any facility managing wastes from these industries shall submit to the US EPA and IDEM, OAQ by the initial startup for a new source with an initial startup after the effective date, a report that summarizes the regulatory status of each waste stream subject to 40 CFR 61.342 and is determined by the procedures specified in 40 CFR 61.355(c) to contain benzene. The report shall include the following information:

(1) Total annual benzene quantity from facility waste determined in accordance with 40 CFR 61.355(a).

(2) A table identifying each waste stream and whether or not the waste stream will be controlled for benzene emissions in accordance with the requirements of 40 CFR Part 61, Subpart FF.

(3) For each waste stream identified as not being controlled for benzene emissions in accordance with the requirements of 40 CFR Part 61, Subpart FF the following information shall be added to the table:

(i) Whether or not the water content of the waste stream is greater than 10 percent;

(ii) Whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate;

(iii) Annual waste quantity for the waste stream;

(iv) Range of benzene concentrations for the waste stream;

(v) Annual average flow weighted benzene concentration for the waste stream; and

(vi) Annual benzene quantity for the waste stream.

(4) The information required in 40 CFR 61.357(a)(1), (2), and (3) should represent the waste stream characteristics based on current configuration and operating conditions. The Permittee only needs to list in the report those waste streams that contact material containing benzene. The report does not need to include a description of the controls to be installed to comply with the standard or other information required in 40 CFR 61.10(a).

(b) Pursuant to 40 CFR 61.357(b), if the total annual benzene quantity from facility waste is less than 1 Mg/yr (1.1 ton/yr), then the Permittee shall submit to IDEM, OAQ a report that updates the information listed in 40 CFR 61.357(a)(1) through 61.357(a)(3) whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility waste to increase to 1 Mg/yr (1.1 ton/yr) or more.

(c) Pursuant to 40 CFR 61.357(c), if the total annual benzene quantity from facility waste is less than 10 Mg/yr (11 ton/yr) but is equal to or greater than 1 Mg/yr (1.1 ton/yr), then the Permittee shall submit to IDEM, OAQ a report that updates the information listed in 40 CFR 61.357(a)(1) through

61.357(a)(3). The report shall be submitted annually and whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr (11 ton/yr) or more. If the information in the annual report required by 40 CFR 61.357(a)(1) through 61.357(a)(3) is not changed in the following year, the Permittee may submit a statement to that effect.

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

SECTION GG 40 CFR 60, Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

Definitions contained in 40 CFR Part 60, Subpart VV, Section 481 are applicable to the Permittee.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

GG.1 Standards: Pumps in Light Liquid Service [326 IAC 12][40 CFR 60.482-2, Subpart VV]

(a) Pursuant to 40 CFR 60.482-2(a), each pump in light liquid service shall:

(1) Be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b), except as provided in 40 CFR 60.482–1(c), 40 CFR 60.482–2(d), 40 CFR 60.482–2(e), and 40 CFR 60.482–2(f).

(2) Be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b) Pursuant to 40 CFR 60.482-2(b):

(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c) Pursuant to 40 CFR 60.482-2(c):

(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Pursuant to 40 CFR 60.482-2(d), each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 60.482-2(a), provided the following requirements are met:

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482–10; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5) The following requirements are met:

(i) Each sensor as described in 40 CFR 60.482-2(d)(3) is checked daily or is equipped with an audible alarm;

(ii) The Permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6) (i) Pursuant to 40 CFR 60.482-2(d)(6)(i), if there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier

fluid system, or both based on the criterion determined in 40 CFR 60.482-2(d)(5)(ii), a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.

(iii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Pursuant to 40 CFR 60.482-2(e), any pump that is designated, as described in 40 CFR 60.486(e)(1) and 60.486(e)(2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements 40 CFR 60.486(c), and 60.486(d) if the pump:

(1) Has no externally actuated shaft penetrating the pump housing,

(2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in 40 CFR 60.485(c), and

(3) Is tested for compliance with 40 CFR 60.482-2(e)(2) initially upon designation, annually, and at other times requested by the US EPA and IDEM, OAQ.

(f) Pursuant to 40 CFR 60.482-2(f), if any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482-10, it is exempt from 40 CFR 60.482-2(a) through 60.482-2(e).

(g) Pursuant to 40 CFR 60.482-2(g), any pump that is designated, as described in 40 CFR 60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of 40 CFR 60.482-2(a) and 60.482-2(d)(4) through 60.482-2(d)(6) if:

(1) The Permittee demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 60.482-2(a); and

(2) The Permittee has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 40 CFR 60.482-2(c) if a leak is detected.

(h) Pursuant to 40 CFR 60.482 2(h), any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR 60.482-2(a)(2), and 40 CFR 60.482-2(d)(4), and the daily requirements of 40 CFR 60.482-2(d)(5), provided that each pump is visually inspected as often as practicable and at least monthly.

GG.2 Standards: Compressors [326 IAC 12][40 CFR 60.482-3, Subpart VV]

(a) Pursuant to 40 CFR 60.482-3(a), each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR 60.482-1(c), 60.482 3 (h), and 60.482 3(i).

(b) Pursuant to 40 CFR 60.482-3(b), each compressor seal system as required in 40 CFR 60.482-3(a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) Pursuant to 40 CFR 60.482-3(c), the barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Pursuant to 40 CFR 60.482-3(d), each barrier fluid system as described in 40 CFR 60.482-3(a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e) (1) Pursuant to 40 CFR 60.482-3(e)(1), each sensor as required in 40 CFR 60.482-3(d) shall be checked daily or shall be equipped with an audible alarm.

(2) The Permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) Pursuant to 40 CFR 60.482-3(f), if the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under 40 CFR 60.482-3(e)(2), a leak is detected.

(g) (1) Pursuant to 40 CFR 60.482-3(g)(1), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) Pursuant to 40 CFR 60.482-3(h), a compressor is exempt from the requirements of 40 CFR 60.482-3(a) and 40 CFR 60.482-3(b), if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482-10, except as provided in 40 CFR 60.482-3(i).

(i) Pursuant to 40 CFR 60.482-3(i), any compressor that is designated, as described in 40 CFR 60.486(e)(1) and 40 CFR 60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 40 CFR 60.482-3(a) through 40 CFR 60.482-3(h) if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in 40 CFR 60.485(c); and

(2) Is tested for compliance with 40 CFR 60.482-3(i)(1) initially upon designation, annually, and at other times requested by the US EPA and IDEM, OAQ.

(j) Pursuant to 40 CFR 60.482-3(j), any existing reciprocating compressor in a process unit which becomes an affected facility under 40 CFR 60.14 or 40 CFR 60.15 is exempt from 40 CFR 60.482(a), 60.482(b), 60.482(c), 60.482(d), 60.482(e), and 60.482(h), provided the Permittee demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of 40 CFR 60.482(a), 60.482(b), 60.482(c), 60.482(d), 60.482(e), and 60.482(h).

GG.3 Standards: Pressure Relief Devices in Gas/Vapor Service [326 IAC 12][40 CFR 60.482-4, Subpart VV]

(a) Pursuant to 40 CFR 60.482-4(a), except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR 60.485(c).

(b) (1) Pursuant to 40 CFR 60.482-4(b)(1), after each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR 60.482-9.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR 60.485(c).

(c) Pursuant to 40 CFR 60.482-4(c), any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage

through the pressure relief device to a control device as described in 40 CFR 60.482-10 is exempted from the requirements of 40 CFR 60.482-4(a) and 60.482-4(b).

(d) (1) Pursuant to 40 CFR 60.482-4(d)(1), any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of 40 CFR 60.482-4(a) and 40 CFR 60.482-4(b), provided the Permittee complies with the requirements in 40 CFR 60.482-4(d)(2).

(2) After each pressure release, a new rupture disk is installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 60.482-9.

GG.4 Standards: Sampling Connection Systems [326 IAC 12][40 CFR 60.482-5, Subpart VV]

(a) Pursuant to 40 CFR 60.482-5(a), each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system except as provided in 40 CFR 60.482-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Pursuant to 40 CFR 60.482-5(b), each closed-purge, closed-loop, or closed-vent system as required in 40 CFR 60.482-5(a) shall comply with the following requirements:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR 60.482-10; or

(4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(i) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR Part 63, Subpart G, applicable to Group 1 wastewater streams;

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR Part 261.

(c) Pursuant to 40 CFR 60.482-5(c), in situ sampling systems and sampling systems without purges are exempt from the requirements of 40 CFR 60.482-5(a) and 40 CFR 60.482-5(b).

GG.5 Standards: Open-Ended Valves or Lines [326 IAC 12][40 CFR 60.482-6, Subpart VV]

(a) (1) Pursuant to 40 CFR 60.482-6(a)(1), each open ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482–1(c).

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open ended valve or line.

(b) Pursuant to 40 CFR 60.482-6(b), each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) Pursuant to 40 CFR 60.482-6(c), when a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR 60.482-6(a) at all other times.

(d) Pursuant to 40 CFR 60.482-6(d), open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR 60.482-6(a), 60.482-6(b) and 60.482-6(c).

(e) Pursuant to 40 CFR 60.482-6(e), open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety

hazard if capped or equipped with a double block and bleed system as specified in 40 CFR 60.482-6(a) through 40 CFR 60.482-6(c) are exempt from the requirements of 40 CFR 60.482-6(a) through 40 CFR 60.482-6(c).

GG.6 Standards: Valves in Gas/Vapor Service and in Light Liquid Service
[326 IAC 12][40 CFR 60.482-7, Subpart VV]

(a) Pursuant to 40 CFR 60.482-7(a), each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b) and shall comply with 40 CFR 60.482-7(b) through 40 CFR 60.482-7(e), except as provided in 40 CFR 60.482-7(f), 40 CFR 60.482-7(g), and 40 CFR 60.482-7(h), 40 CFR 60.483–1, 2, and 40 CFR 60.482–1(c).

(b) Pursuant to 40 CFR 60.482-7(b), if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) (1) Pursuant to 40 CFR 60.482-7(c)(1), any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d) (1) Pursuant to 40 CFR 60.482-7(d)(1), when a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Pursuant to 40 CFR 60.482-7(e), first attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Pursuant to 40 CFR 60.482-7(f), any valve that is designated, as described in 40 CFR 60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of 40 CFR 60.482-7(a) if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR 60.485(c), and

(3) Is tested for compliance with 40 CFR 60.482-7(f)(2) initially upon designation, annually, and at other times requested by the US EPA and IDEM, OAQ.

(g) Pursuant to 40 CFR 60.482-7(g), any valve that is designated, as described in 40 CFR 60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR 60.482-7(a) if:

(1) The Permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 60.482-7(a), and

(2) The Permittee of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Pursuant to 40 CFR 60.482-7(h), any valve that is designated, as described in 40 CFR 60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of 40 CFR 60.482-7(a) if:

(1) The Permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 or the Permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

(3) The Permittee follows a written plan that requires monitoring of the valve at least once per calendar year.

GG.7 Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors [326 IAC 12][40 CFR 60.482-8, Subpart VV]

(a) Pursuant to 40 CFR 60.482-8(a), if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the Permittee shall follow either one of the following procedures:

(1) The Permittee shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485(b) and shall comply with the requirements of 40 CFR 60.482-8(b) through 40 CFR 60.482-8(d).

(2) The Permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

(b) Pursuant to 40 CFR 60.482-8(b), if an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) (1) Pursuant to 40 CFR 60.482-8(c)(1), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Pursuant to 40 CFR 60.482-8(d), first attempts at repair include, but are not limited to, the best practices described under 40 CFR 60.482-7(e).

GG.8 Standards: Closed Vent Systems and Control Devices [326 IAC 12][40 CFR 60.482-10, Subpart VV]

(a) Pursuant to 40 CFR 60.482-10(a), the Permittee of closed vent systems and control devices used to comply with provisions of 40 CFR 60, Subpart VV shall comply with the provisions 40 CFR 60.482-10, Subpart VV.

(b) Pursuant to 40 CFR 60.482-10(b), vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.

(c) Pursuant to 40 CFR 60.482-10(c), enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 □C.

(d) [Reserved]

(e) Pursuant to 40 CFR 60.482-10(e), for control devices used to comply with the provisions of 40 CFR 60, Subpart VV, the Permittee shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Pursuant to 40 CFR 60.482-10(f), except as provided in 40 CFR 60.482-10(i) through 40 CFR 60.482-10(k), each closed vent system shall be inspected according to the procedures and schedule specified below:

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the Permittee shall comply with the requirements specified in 40 CFR 60.482-10(f)(1)(i) and 40 CFR 60.482-10(f)(1)(ii):

(i) Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the Permittee shall:

(i) Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and

(ii) Conduct annual inspections according to the procedures in 40 CFR 60.485(b).

(g) Pursuant to 40 CFR 60.482-10(g), leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in 40 CFR 60.482-10(h).

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Pursuant to 40 CFR 60.482-10(h), delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the Permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(i) Pursuant to 40 CFR 60.482-10(i), if a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of 40 CFR 60.482-10(f)(1)(i) and 40 CFR 60.482-10(f)(2).

(j) Pursuant to 40 CFR 60.482-10(j), Any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10(l)(1), as unsafe to inspect are exempt from the inspection requirements of 40 CFR 60.482-10(f)(1)(i) and 60.482-10(f)(2) if they comply with the requirements specified in 40 CFR 60.482-10(j)(1) and 60.482-10(j)(2):

(1) The Permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with 40 CFR 60.482-10(f)(1)(i) and 40 CFR 60.482-10(f)(2); and

(2) The Permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Pursuant to 40 CFR 60.482-10(k), any parts of the closed vent system that are designated, as described in 40 CFR 60.482-10(l)(2), as difficult to inspect are exempt from the inspection requirements of 40 CFR 60.482-10(f)(1)(i) and 60.482-10(f)(2) if they comply with the requirements specified below:

(1) The Permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through 40 CFR 60.14 and 60.15, or the Permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The Permittee has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) [Applicable under GG.14]

(m) Pursuant to 40 CFR 60.482-10(m), closed vent systems and control devices used to comply with provisions of 40 CFR 60, Subpart VV shall be operated at all times when emissions may be vented to them.

GG.9 Standards: Delay of Repair [326 IAC 12][40 CFR 60.482-9, Subpart VV]

(a) Pursuant to 40 CFR 60.482-9(a), delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Pursuant to 40 CFR 60.482-9(b), delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Pursuant to 40 CFR 60.482-9(c), delay of repair for valves will be allowed if:

(1) The Permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10.

(d) Pursuant to 40 CFR 60.482-9(d), delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Pursuant to 40 CFR 60.482-9(e), delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

GG.10 Standards: General [326 IAC 12][40 CFR 60.482 1, Subpart VV]

(a) Pursuant to 40 CFR 60.482 1(a), each Permittee subject to the provisions of 40 CFR Part 60, Subpart VV shall demonstrate compliance with the requirements of 40 CFR 60.482–1 through 60.482–10 or 40 CFR 60.480(e) for all equipment.

(b) Pursuant to 40 CFR 60.482 1(b), compliance with 60.482–1 through 60.482–10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485.

(c) (1) Pursuant to 40 CFR 60.482 1(c)(1), a Permittee may request a determination of equivalence of a means of emission limitation to the requirements of 40 CFR 60.482–2, 60.482–3, 60.482–5, 60.482–6, 60.482–7, 60.482–8, and 60.482–10 as provided in 60.484.

(2) If IDEM, OAQ makes a determination that a means of emission limitation is at least equivalent to the requirements of 40 CFR 60.482–2, 60.482–3, 60.482–5, 60.482–6, 60.482–7, 60.482–8, or 60.482–10, a Permittee shall comply with the requirements of that determination.

(d) Pursuant to 40 CFR 60.482 1(d), equipment that is in vacuum service is excluded from the requirements of 40 CFR 60.482–2 through 60.482–10 if it is identified as required in 40 CFR 60.486(e)(5).

GG.11 Alternative Standards: Valves-Allowable Percentage of Valves Leaking.
[326 IAC 12][40 CFR 60.483-1, Subpart VV]

(a) Pursuant to 40 CFR 60.483-1(a), a Permittee may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) Pursuant to 40 CFR 60.483-1(b), the following requirements shall be met if a Permittee wishes to comply with an allowable percentage of valves leaking:

(1) [Reserved]

(2) A performance test as specified in 40 CFR 60.483-1(c) shall be conducted initially upon designation, annually, and at other times requested by IDEM, OAQ.

(3) If a valve leak is detected, it shall be repaired in accordance with 40 CFR 60.482–7(d) and 60.482–7(e).

(c) Pursuant to 40 CFR 60.483-1(c), performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in 40 CFR 60.485(b).

(2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

(d) Pursuant to 40 CFR 60.483-1(d), a Permittee who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent.

GG.12 Alternative Standards: Valves Skip Period Leak Detection and Repair [326 IAC 12][40 CFR 60.483-2, Subpart VV]

(a) (1) Pursuant to 40 CFR 60.483-2(a)(1), a Permittee may elect to comply with one of the alternative work practices specified in 40 CFR 60.483-2(b)(2) and 60.483-2(b)(3).

(2) [Reserved]

(b) (1) Pursuant to 40 CFR 60.483-2(b)(1), a Permittee shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in 40 CFR 60.482-7.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, a Permittee may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, a Permittee may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the Permittee shall comply with the requirements as described in 40 CFR 60.482-7 but can again elect to use 40 CFR 60.483-2.

(5) The percent of valves leaking shall be determined by dividing the sum of valves found leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements of 40 CFR 60.483-2.

(6) A Permittee must keep a record of the percent of valves found leaking during each leak detection period.

Compliance Determination Requirements

GG.13 Test Methods and Procedures [326 IAC 12][40 CFR 60.485, Subpart VV]

(a) Pursuant to 40 CFR 60.485(a), in conducting the performance tests required in 40 CFR 60.8, the Permittee shall use as reference methods and procedures the test methods in 40 CFR Part 60, Appendix A or other methods and procedures as specified in 40 CFR 60.485, except as provided in 40 CFR 60.8(b).

(b) Pursuant to 40 CFR 60.485(b), the Permittee shall determine compliance with the standards in 40 CFR 60.482, and 60.483 as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.

(c) Pursuant to 40 CFR 60.485(c), the Permittee shall determine compliance with the no detectable emission standards in 40 CFR 60.482–2(e), 60.482–3(i), 60.482–4, 60.482–7(f), and 60.482–10(e) as follows:

(1) The requirements of 40 CFR 60.485(b) shall apply.

(2) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) Pursuant to 40 CFR 60.485(d), the Permittee shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference in 40 CFR 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the US EPA and IDEM, OAQ to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the US EPA and IDEM, OAQ disagrees with the judgment, 40 CFR 60.485(d)(1) and 40 CFR 60.485(d)(2) shall be used to resolve the disagreement.

(e) Pursuant to 40 CFR 60.485(e), the Permittee shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C (1.2 in. H2O at 68°F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference in 40 CFR 60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H2O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Pursuant to 40 CFR 60.485(f), samples used in conjunction with 40 CFR 60.485(d), 40 CFR 60.485(e), and 40 CFR 60.485(g) shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) [Reserved]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)][326 IAC 2-7-19]

GG.14 Standards: Closed Vent Systems and Control Devices [326 IAC 12][40 CFR 60.482-10, Subpart VV]

(a) [Applicable under GG.8]

(b) [Applicable under GG.8]

(c) [Applicable under GG.8]

(d) [Reserved]

(e) [Applicable under GG.8]

(f) [Applicable under GG.8]

(g) [Applicable under GG.8]

(h) [Applicable under GG.8]

(i) [Applicable under GG.8]

(j) [Applicable under GG.8]

(k) [Applicable under GG.8]

(l) Pursuant to 40 CFR 60.482-10(l), the Permittee shall record the information specified below:

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in 40 CFR 60.486(c).

(4) For each inspection conducted in accordance with 40 CFR 60.485(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(5) For each visual inspection conducted in accordance with 40 CFR 60.482-10(f)(1)(ii) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) [Applicable under GG.8]

GG.15 Recordkeeping Requirements [326 IAC 12][40 CFR 60.486, Subpart VV]

(a) (1) Pursuant to 40 CFR 60.486(a)(1), the Permittee subject to the 40 CFR 60, Subpart VV shall comply with the recordkeeping requirements of this section.

(2) The Permittee of more than one affected facility subject to 40 CFR 60, Subpart VV may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(b) Pursuant to 40 CFR 60.486(b), when each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

(c) Pursuant to 40 CFR 60.486(c), when each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.

(5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the employee whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) Pursuant to 40 CFR 60.486(d), the following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10 shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed vent systems and control devices required in 40 CFR 60.482–2, 60.482–3, 60.482–4, and 60.482–5 are not operated as designed.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR 60.482–2, 60.482–3, 60.482–4, and 60.482–5.

(e) Pursuant to 40 CFR 60.486(e), the following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1 through 40 CFR 60.482-10 and shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of 40 CFR 60, Subpart VV.

(2) (i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e), 60.482-3(i) and 60.482-7(f)

(ii) The designation of equipment as subject to the requirements of 40 CFR 60.482–2(e), 60.482–3(i), or 60.482–7(f) shall be signed by the Permittee.

(3) A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482–4.

(4) (i) The dates of each compliance test as required in 40 CFR 60.482–2(e), 60.482–3(i), 60.482–4, and 60.482–7(f);

(ii) The background level measured during each compliance test;

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(f) Pursuant to 40 CFR 60.486(f), the following information pertaining to all valves subject to the requirements of 40 CFR 60.482–7(g) and 60.482–7(h) and to all pumps subject to the requirements of 40 CFR 60.482–2(g) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

(2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

(g) Pursuant to 40 CFR 60.486(g), the following information shall be recorded for valves complying with 40 CFR 60.483–2:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) Pursuant to 40 CFR 60.486(h), the following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in 40 CFR 60.482–2(d)(5) and 60.482–3(e)(2) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(i) Pursuant to 40 CFR 60.486(i), the following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 60.480(d):

(1) An analysis demonstrating the design capacity of the affected facility,

(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and

(3) An analysis demonstrating that equipment is not in VOC service.

(j) Pursuant to 40 CFR 60.486(j), information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(k) Pursuant to 40 CFR 60.486(k), the provisions of 40 CFR 60.7(b) and 40 CFR 60.7(d) do not apply to affected facilities subject to 40 CFR 60, Subpart VV.

GG.16 Reporting Requirements [326 IAC 12][40 CFR 60.487, Subpart VV]

(a) Pursuant to 40 CFR 60.487(a), the Permittee shall submit semiannual reports to IDEM, OAQ.

(b) [Reserved]

(c) Pursuant to 40 CFR 60.487(c), all semiannual reports to IDEM, OAQ shall include the following information, summarized from the information required in 40 CFR 60.486.

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in 40 CFR 60.482(7)(b) or 60.483-2,

(ii) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d)(1),

(iii) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2(b) and 60.482-2(d)(6)(i),

(iv) Number of pumps for which leaks were not repaired as required in 40 CFR 60.482-2(c)(1) and 60.482-2(d)(6)(ii),

(v) Number of compressors for which leaks were detected as described in 40 CFR 60.482-3(f),

(vi) Number of compressors for which leaks were not repaired as required in 40 CFR 60.482-3(g)(1), and

(vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported in the initial semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

SECTION HH 40 CFR 60, Subpart NNN—Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

Definitions contained in 40 CFR Part 60, Subpart NNN, Section 661 are applicable to the Permittee.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

HH.1 Applicability and Designation of Affected Facility [326 IAC 12][40 CFR 60.660, Subpart NNN]

(a) The provisions of 40 CFR 60, Subpart NNN apply to each affected facility designated in 40 CFR 60.660(b) that is part of a process unit that produces any of the chemicals listed in 40 CFR 60.667 as a product, co product, by product, or intermediate, except as provided in 40 CFR 60.660(c).

(b) The affected facility is any of the following for which construction, modification, or reconstruction commenced after December 30, 1983:

(1) [Reserved]

(2) Each combination of a distillation unit and the recovery system into which its vent stream is discharged.

(3) [Reserved]

(c) Exemptions from the provisions of 40 CFR 60.660(a) are as follows:

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) Each affected facility that has a total resource effectiveness (TRE) index value greater than 8.0 is exempt from all provisions of this subpart except for §§60.662; 60.664(e), (f), and (g); and 60.665 (h) and (l).

(5) [Reserved]

(6) Each affected facility operated with a vent stream flow rate less than 0.008 scm/min is exempt from all provisions of this subpart except for the test method and procedure and the recordkeeping and reporting requirements in §60.664(g) and paragraphs (i), (l)(5), and (o) of §60.665.

(d) [Reserved]

HH.2 Standards: [326 IAC 12][40 CFR 60.662, Subpart NNN]

Pursuant to 40 CFR 60.662, the Permittee of any affected facility shall comply with paragraph 40 CFR 60.662(a) or 60.662(c) for each vent stream. The Permittee shall either:

(a) Pursuant to 40 CFR 60.662(a), the Permittee shall reduce emissions of TOC (less methane and ethane) by 98 weight percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with 40 CFR 60.662(a), then the vent stream shall be introduced into the flame zone of the boiler or process heater; or

(b) [Reserved]

(c) Pursuant to 40 CFR 60.662(c), the Permittee shall maintain a TRE index value greater than 1.0 without use of VOC emission control devices.

Compliance Determination Requirements

HH.3 Test Methods and Procedures. [326 IAC 12] [40 CFR 60.664, Subpart NNN]

(a) Pursuant to 40 CFR 60.664(a), for the purpose of demonstrating compliance with 40 CFR 60.662, all affected facilities shall be run at full operating conditions and flow rates during any performance test.

(b) Pursuant to 40 CFR 60.664(b), the following methods in Part 60, Appendix A, except as provided under 40 CFR 60.8(b), shall be used as reference methods to determine compliance with the emission limit or percent reduction efficiency specified under 40 CFR 60.662(a).

(1) Method 1 or 1A, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or TOC (less methane and ethane) reduction efficiency shall be prior to the inlet of the control device and after the recovery system.

(2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of the gas volumetric flow rates.

(3) The emission rate correction factor, integrated sampling and analysis procedure of Method 3 shall be used to determine the oxygen concentration (%O2d) for the purposes of determining compliance with the 20 ppmv limit. The sampling site shall be the same as that of the TOC samples, and the samples shall be taken during the same time that the TOC samples are taken.

The TOC concentration corrected to 3 percent 0_2 (Cc) shall be computed using the following equation:

$$C_c = C_{TOC} \frac{17.9}{20.9 - \%O_{2d}}$$

where:

Cc = Concentration of TOC corrected to 3 percent O2, dry basis, ppm by volume.

CTOC = Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.

% O2d = Concentration of O2, dry basis, percent by volume.

(4) Method 18 to determine the concentration of TOC in the control device outlet and the concentration of TOC in the inlet when the reduction efficiency of the control device is to be determined.

(i) The sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used then the samples shall be taken at 15 minute intervals.

(ii) The emission reduction (R) of TOC (minus methane and ethane) shall be determined using the following equation:

$$R = \frac{E_i - E_o}{E_i} \times 100$$

where:

R = Emission reduction, percent by weight.

Ei = Mass rate of TOC entering the control device, kg/hr (lb/hr).

Eo = Mass rate of TOC discharged to the atmosphere, kg/hr (lb/hr).

(iii) The mass rates of TOC (Ei, Eo) shall be computed using the following equations:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i$$

$$E_O = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_O$$

where:

Cij, Coj = Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppm by volume.

Mij, Moj = Molecular weight of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, g/g-mole (lb/lb-mole).

Qi, Qo = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dscm/min (dscf/min).

K2 = 2.494 × 10-6 (1/ppm)(g-mole/scm) (kg/g) (min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 °C.

= 1.557 × 10-7 (1/ppm) (lb-mole/scf) (min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 °F.

(iv) The TOC concentration (CTOC) is the sum of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{j=1}^{n} C_j$$

where:

CTOC = Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.

Cj = Concentration of sample components "j", dry basis, ppm by volume.

n = Number of components in the sample.

(c) Pursuant to 40 CFR 60.664(c), when a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used to seek to comply with 40 CFR 60.662(a), the requirement for an initial performance test is waived, in accordance with 40 CFR 60.8(b). However, IDEM, OAQ reserves the option to require testing at such other times as may be required, as provided for in section 114 of the Clean Air Act.

(d) [Reserved]

(e) Pursuant to 40 CFR 60.664(e), the following test methods in Part 60, Appendix A, except as provided under 40 CFR 60.8(b), shall be used for determining the net heating value of the gas combusted for determining the process vent stream TRE index value to determine compliance under 40 CFR 60.662(c).

(1) (i) Method 1 or 1A, as appropriate, for selection of the sampling site. The sampling site for the vent stream flow rate and molar composition determination prescribed in 40 CFR 60.664(e)(2) and 60.664(e)(3) shall be, except for the situations outlined in 40 CFR 60.664(e)(1)(ii), prior to the inlet of any control device, prior to any post distillation dilution of the stream with air, and prior to any post distillation introduction of halogenated compounds into the process vent stream. No transverse site selection method is needed for vents smaller than 10 centimeters (4 inches) in diameter.

(ii) If any gas stream other than the distillation vent stream from the affected facility is normally conducted through the final recovery device.

(A) The sampling site for vent stream flow rate and molar composition shall be prior to the final recovery device and prior to the point at which the nondistillation stream is introduced.

(B) The efficiency of the final recovery device is determined by measuring the TOC concentration using Method 18 at the inlet to the final recovery device after the introduction of any nondistillation vent stream and at the outlet of the final recovery device.

(C) This efficiency is applied to the TOC concentration measured prior to the final recovery device and prior to the introduction of the nondistillation stream to determine the concentration of TOC in the distillation vent stream from the final recovery device. This concentration of TOC is then used to perform the calculations outlined in 40 CFR 60.664(e)(4) and 60.664(e)(5)

(2) The molar composition of the process vent stream shall be determined as follows:

(i) Method 18 to measure the concentration of TOC including those containing halogens.

(ii) ASTM D1946–77 or 90 (Reapproved 1994) (incorporation by reference as specified in 40 CFR 60.17) to measure the concentration of carbon monoxide and hydrogen.

(iii) Method 4 to measure the content of water vapor.

(3) The volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D, as appropriate.

(4) The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1\left(\sum_{j=1}^{n} C_j H_j\right)$$

where:

HT = Net heating value of the sample, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (77 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F).

K1 = 1.74 × 10-7 (1/ppm) (g-mole/scm) (MJ/kcal) (metric units), where standard temperature for (g-mole/scm) is 20 °C.

= 1.03 × 10-11 (1/ppm) (lb-mole/scf) (Btu/kcal) (English units) where standard temperature for (lb/mole/scf) is 68 °F.

Cj = Concentration on a wet basis of compound j in ppm, as measured for organics by Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 or 90 (Reapproved 1994) (incorporation by reference as specified in 40 CFR 60.17) as indicated in 40 CFR 60.664(e)(2).

Hj = Net heat of combustion of compound j, kcal/(g-mole) [kcal/(lb-mole)], based on combustion at 25 °C and 760 mm Hg (77 °F and 30 in. Hg).

The heats of combustion of vent stream components would be required to be determined using ASTM D2382–76 (incorporation by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

(5) The emission rate of TOC in the vent stream shall be calculated using the following equation:

$$E_{TOC} = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

where:

ETOC = Measured emission rate of TOC, kg/hr (lb/hr).

K2 = 2.494×10-6 (1/ppm) (g-mole/scm) (kg/g) (min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 °C.

= 1.557 × 10-7 (1/ppm) (lb-mole/scf) (min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 °F.

Cj = Concentration on a wet basis of compound j in ppm, as measured by Method 18 as indicated in 40 CFR 60.664(e)(2).

Mj = Molecular weight of sample j, g/g-mole (lb/lb-mole).

Qs = Vent stream flow rate, scm/min (scf/min), at a temperature of 20 °C (68 °F).

(6) The total process vent stream concentration (by volume) of compounds containing halogens (ppmv, by compound) shall be summed from the individual concentrations of compounds containing halogens which were measured by Method 18.

(f) Pursuant to 40 CFR 60.664(f), for purposes of complying with 40 CFR 60.662(c) the Permittee of a facility affected by 40 CFR 60, Subpart NNN shall calculate the TRE index value of the vent stream using the equation for incineration in 40 CFR 60.664(f)(1) for halogenated vent streams. The Permittee of an affected facility with a nonhalogenated vent stream shall determine the TRE index value by calculating values using both the incinerator equation in 40 CFR 60.664(f)(1) and the flare equation in 40 CFR 60.664(f)(2) and selecting the lower of the two values.

(1) The equation for calculating the TRE index value of a vent stream controlled by an incinerator is as follows:

$$TRE = \frac{1}{E_{TOC}} \left[a + b(Q_s) + c(Q_s)^{0.88} + d(Q_s)(H_T) + e(Q_s)^{0.88}(H_T)^{0.88} + f(Y_s)^{0.5} \right]$$

(i) Where for a vent stream flow rate that is greater than or equal to 14.2 scm/min (501 scf/min) at a standard temperature of 20 °C (68 °F):

TRE = TRE index value.

Qs = Vent stream flow rate, scm/min (scf/min), at a temperature of 20 °C (68 °F).

HT = Vent stream net heating value, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (68 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F) as in the definition of Qs.

Ys = Qs for all vent stream categories listed in Table 1 in 40 CFR 60.664 except for Category E vent streams where

Ys = QsHT/3.6.

ETOC = Hourly emissions of TOC, kg/hr (lb/hr).

a, b, c, d, e, and f are coefficients.

The set of coefficients that apply to a vent stream can be obtained from Table 1.

TABLE 1. DISTILLATION NSPS TRE COEFFICIENTS FOR VENT STREAMS

CONTROLLED BY AN INCINERATOR

DESIGN CATEGORY A1. FOR HALOGENATED PROCESS VENT STREAMS, IF 0 ≤ NET HEATING VALUE (MJ/scm) ≤ 3.5 OR IF 0 ≤ NET HEATING VALUE (Btu/scf) ≤ 94:

Q_s = Vent Stream Flow rate scm/min (scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 18.8$	18.84466	0.26742	-0.20044	0	0	0.01025
$(501 \le Q_s \le 664)$	(41.54494)	(0.016696)	(-0.019194)	(0)	(0)	(0.003803)
$18.8 < Q_s \le 699$	19.66658	0.26742	-0.25332	0	0	0.01025
$(664 < Q_s \le 24,700)$	(43.35694)	(0.016696)	(-0.024258)	(0)	(0)	(0.003803)
$699 < Q_s \le 1400$	39.19213	0.29062	-0.25332	0	0	0.01449
$(24,700 < Q_s \le 49,000)$	(86.40297)	(0.018145)	(-0.024258)	(0)	(0)	(0.005376)
$1400 < Q_s \le 2100$	58.71768	0.30511	-0.25332	0	0	0.01775
$(49,000 < Q_s \le 74,000)$	(129.4490)	(0.019050)	(-0.024258)	(0)	(0)	(0.006585)
$2100 < Q_s \le 2800$	78.24323	0.31582	-0.25332	0	0	0.02049
$(74,000 < Q_s \le 99,000)$	(172.4950)	(0.019718)	(-0.024258)	(0)	(0)	(0.007602)
$2800 < Q_s \le 3500$	97.76879	0.32439	-0.25332	0	0	0.02291
$(99,000 < Q_s \le 120,000)$	(215.5411)	(0.020253)	(-0.024258)	(0)	(0)	(0.008500)

DESIGN CATEGORY A2. FOR HALOGENATED PROCESS VENT STREAMS, IF NET HEATING VALUE < 3.5 (MJ/scm) OR IF NET HEATING VALUE < 94 (Btu/scf):

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 18.8$	18.84466	0.26742	-0.20044	0	0	0.01025
$(501 \le Q_s \le 664)$	(41.54494)	(0.016696)	(-0.019194)	(0)	(0)	(0.003803)
$18.8 < Q_s \le 699$	19.66658	0.26742	-0.25332	0	0	0.01025
$(664 < Q_s \le 24,700)$	(43.35694)	(0.016696)	(-0.024258)	(0)	(0)	(0.003803)
$699 < Q_s \le 1400$	39.19213	0.29062	-0.25332	0	0	0.01449
$(24,700 < Q_s \le 49,000)$	(86.40297)	(0.018145)	(-0.024258)	(0)	(0)	(0.005376)
$1400 < Q_s \le 2100$	58.71768	0.30511	-0.25332	0	0	0.01775
$(49,000 < Q_s \le 74,000)$	(129.4490)	(0.019050)	(-0.024258)	(0)	(0)	(0.006585)
$2100 < Q_s \le 2800$	78.24323	0.31582	-0.25332	0	0	0.02049
$(74,000 < Q_s \le 99,000)$	(172.4950)	(0.019718)	(-0.024258)	(0)	(0)	(0.007602)
$2800 < Q_s \le 3500$	97.76879	0.32439	-0.25332	0	0	0.02291
$(99,000 < Q_s \le 120,000)$	(215.5411)	(0.020253)	(-0.024258)	(0)	(0)	(0.008500)

DESIGN CATEGORY B. FOR NONHALOGENATED PROCESS VENT STREAMS, IF 0 ≤ NET HEATING VALUE (MJ/scm) ≤ 0.48 OR IF 0 ≤ NET HEATING VALUE (Btu/scf) ≤ 13:

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 1340$	8.54245	0.10555	0.09030	-0.17109	0	0.01025
$(501 \le Q_s \le 47,300)$	(18.83268)	(0.0065901)	(0.008647)	(-0.00039762)	(0)	(0.003803)
$1340 < Q_s \le 2690$	16.94386	0.11470	0.09030	-0.17109	0	0.01449
$(47,300 < Q_s \le 95,000)$	(37.35443)	(0.0071614)	(0.008647)	(-0.00039762)	(0)	(0.005376)
$2690 < Q_s \le 4040$	25.34528	0.12042	0.09030	-0.17109	0	0.01775
$(95,000 < Q_s \le 143,000)$	(55.87620)	(0.0075185)	(0.008647)	(-0.00039762)	(0)	(0.006585)

DESIGN CATEGORY C. FOR NONHALOGENTED PROCESS VENT STREAMS, IF 0.48 < NET HEATING VALUE (MJ/scm) ≤ 1.9 OR IF 13 < NET HEATING VALUE (Btu/scf) ≤ 51:

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 1340$	9.25233	0.06105	0.31937	-0.16181	0	0.01025
$(501 \le Q_s \le 47,300)$	(20.39769)	(0.003812)	(0.030582)	(-0.00037605)	(0)	(0.003803)
$1340 < Q_s \le 2690$	18.36363	0.06635	0.31937	-0.16181	0	0.01449
$(47,300 < Q_s \le 95,000)$	(40.48446)	(0.004143)	(0.030582)	(-0.00037605)	(0)	(0.005376)
$2690 < Q_s \le 4040$	27.47492	0.06965	0.31937	-0.16181	0	0.01775
$(95,000 < Q_s \le 143,000)$	(60.57121)	(0.004349)	(0.030582)	(-0.00037605)	(0)	(0.006585)

DESIGN CATEGORY D. FOR NONHALOGENATED PROCESS VENT STREAMS, IF 1.9 < NET HEATING VALUE (MJ/scm) ≤ 3.6 OR IF 51 < NET HEATING VALUE (Btu/scf) ≤ 97:

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 1180$	6.67868	0.06943	0.02582	0	0	0.01025
$(501 \le Q_s \le 41,700)$	(14.72382)	(0.004335)	(0.002472)	(0)	(0)	(0.003803)
$1180 < Q_s \le 2370$	13.21633	0.07546	0.02582	0	0	0.01449
$(41,700 < Q_s \le 83,700)$	(29.13672)	(0.004711)	(0.002472)	(0)	(0)	(0.005376)
$2370 < Q_s \le 3550$	19.75398	0.07922	0.02582	0	0	0.01775
$(83,700 < Q_s \le 125,000)$	(43.54962)	(0.004946)	(0.002472)	(0)	(0)	(0.006585)

DESIGN CATEGORY E. FOR NONHALOGENATED PROCESS VENT STREAMS, IF NET HEATING VALUE > 3.6 MJ/scm OR IF NET HEATING VALUE > 97 (Btu/scf):

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Y_s \le 1180$	6.67868	0	0	-0.00707	0.02220	0.01025
$(501 \le Y_s \le 41,700)$	(14.72382)	(0)	(0)	(-0.0000164)	(0.0001174)	(0.003803)
$1180 < Y_s \le 2370$	13.21633	0	0	-0.00707	0.02412	0.01449
$(41,700 < Y_s \le 83,700)$	(29.13672)	(0)	(0)	(-0.0000164)	(0.0001276)	(0.005376)
$2370 < Y_s \le 3550$	19.75398	0	0	-0.00707	0.02533	0.01775
$(83,700 < Y_s \le 125,000)$	(43.54962)	(0)	(0)	(-0.0000164)	(0.0001340)	(0.006585)

(ii) Where for a vent stream flow rate that is less than 14.2 scm/min (501 scf/min) at a standard temperature of 20 °C (68 °F):

TRE = TRE index value.

Qs = 14.2 scm/min (501 scf/min).

HT = (FLOW) (HVAL)/Qs.

Where the following inputs are used:

FLOW = Vent stream flow rate, scm/min (scf/min), at a temperature of 20 °C (68 °F).

HVAL = Vent stream net heating value, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (68 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F) as in the definition of Qs.

Ys = Qs for all vent stream categories listed in Table 1 in 40 CFR 60.664 except for Category E vent streams where Ys =QsHT/3.6.

ETOC = Hourly emissions of TOC, kg/hr (lb/hr).

a, b, c, d, e, and f are coefficients

The set of coefficients that apply to a vent stream can be obtained from Table 1 in 40 CFR 60.664.

(2) The equation for calculating the TRE index value of a vent stream controlled by a flare is as follows:

$$TRE = \frac{1}{E_{TOC}}\left[a\left(Q_s\right)+b\left(Q_s\right)^{0.8}+c\left(Q_s\right)\left(H_T\right)+d\left(E_{TOC}\right)+e\right]$$

where:

TRE = TRE index value.

ETOC = Hourly emissions of TOC, kg/hr (lb/hr).

Qs = Vent stream flow rate, scm/min (scf/min), at a standard temperature of 20 °C (68 °F).

HT = Vent stream net heating value, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (68 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F) as in the definition of Qs.

a, b, c, d, and e are coefficients.

The set of coefficients that apply to a vent stream shall be obtained from Table 2 in 40 CFR 60.664.

Table 2. Distillation NSPS TRE Coefficients for Vent Streams Controlled By a Flare

	a	b	c	d	e
HT< 11.2 MJ/scm	2.25	0.288	-0.193	-0.0051	2.08
(HT < 301 Btu/scf)	(0.140)	(0.0367)	(-0.000448)	(-0.0051)	(4.59)
HT ≥ 11.2 MJ/scm	0.309	0.0619	-0.0043	-0.0034	2.08
(HT ≥ 301 Btu/scf)	(0.0193)	(0.00788)	(-0.0000010)	(-0.0034)	(4.59)

(g) Pursuant to 40 CFR 60.664(g), the Permittee of an affected facility seeking to comply with 40 CFR 60.660(c)(4) or 60.662(c) shall recalculate the TRE index value for that affected facility whenever process changes are made. Examples of process changes include changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The TRE index value shall be recalculated based on test data, or on best engineering estimates of the effects of the change to the recovery system.

(1) Where the recalculated TRE index value is less than or equal to 1.0, the Permittee shall notify IDEM, OAQ within 1 week of the recalculation and shall conduct a performance test according to the methods and procedures required by 40 CFR 60.664 in order to determine compliance with 40 CFR 60.662(a). Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.

(2) Where the initial TRE index value is greater than 8.0 and the recalculated TRE index value is less than or equal to 8.0 but greater than 1.0, the Permittee shall conduct a performance test in accordance with 40 CFR 60.8 and 60.664 and shall comply with 40 CFR 60.663, 60.664 and 60.665. Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.

(h) Pursuant to 40 CFR 60.664(h), the Permittee subject to the provisions of 40 CFR 60, Subpart NNN seeking to demonstrate compliance with 40 CFR 60.660(c)(6) shall use Method 2, 2A, 2C, or 2D as appropriate, for determination of volumetric flow rate.

Recordkeeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

HH.4 Recordkeeping and Reporting Requirements [326 IAC 12] [40 CFR 60.665, Subpart NNN]

(a) Pursuant to 40 CFR 60.665(a), the Permittee subject to 40 CFR 60.662 shall notify IDEM, OAQ of the specific provisions of 40 CFR 60.662 (60.662(a) or 60.662(c)) with which the Permittee has elected to comply. If the Permittee elects at a later date to use an alternative provision of 40 CFR 60.662 with which he or she will comply, then IDEM, OAQ shall be notified by the Permittee 90 days before implementing a change and, upon implementing the change, a performance test shall be performed as specified by 40 CFR 60.664 within 180 days.

(b) Pursuant to 40 CFR 60.665(b), the Permittee subject to the provisions of 40 CFR Part 60, Subpart NNN shall keep an up to date, readily accessible record of the following data measured during each performance test. The same data specified in 40 CFR 60.665 shall be submitted in the reports of all subsequently required performance tests where the TRE index value of a vent stream from a recovery system is determined.

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) Where the Permittee subject to the provisions of 40 CFR Part 60, Subpart NNN seeks to demonstrate compliance with 40 CFR 60.662(c):

(i) [Reserved]

(ii) [Reserved]

(iii) [Reserved]

(iv) [Reserved]

(v) All measurements and calculations performed to determine the TRE index value of the vent stream.

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) Pursuant to 40 CFR 60.665(h), the Permittee of an affected facility subject to the provisions of 40 CFR 60, Subpart NNN and seeking to demonstrate compliance with 40 CFR 60.662(c) shall keep up to date, readily accessible records of:

(1) Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal or addition of recovery equipment or a distillation unit;

(2) Any recalculation of the TRE index value performed pursuant to 40 CFR 60.664(f); and

(3) [Reserved]

(i) Pursuant to 40 CFR 60.665(i), the Permittee of an affected facility that seeks to comply with the requirements of 40 CFR Part 60, Subpart NNN by complying with the flow rate cutoff in 40 CFR 60.660(c)(6) shall keep up to date, readily accessible records to indicate that the vent stream flow rate is less than 0.008 scm/min (0.3 scf/min) and of any change in equipment or process operation

that increases the operating vent stream flow rate, including a measurement of the new vent stream flow rate.

(j) [Reserved]

(k) [Reserved]

(l) Pursuant to 40 CFR 60.665(l), the Permittee that seeks to comply with the requirements of 40 CFR 60, Subpart NNN by complying with the requirements of 40 CFR 60.660(c)(4), 60.660(c)(6) or 60.662 shall submit to IDEM, OAQ semiannual reports of the following recorded information.

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) [Reserved]

(5) Any change in equipment or process operation that increases the operating vent stream flow rate above the low flow exemption level in 40 CFR 60.660(c)(6), including a measurement of the new vent stream flow rate, as recorded under 40 CFR 60.665(i). These must be reported as soon as possible after the change and no later than 180 days after the change. These reports may be submitted either in conjunction with semiannual reports or as a single separate report. A performance test must be completed with the same time period to verify the recalculated flow value and to obtain the vent stream characteristics of heating value and ETOC. The performance test is subject to the requirements of 40 CFR 60.8 of the General Provisions. Unless the facility qualifies for an exemption under the low capacity exemption status in 40 CFR 60.660(c)(5), the facility must begin compliance with the requirements set forth in 40 CFR 60.662.

(6) [Reserved]

(7) Any recalculation of the TRE index value, as recorded under 40 CFR 60.665(h).

(m) [Reserved]

(n) [Reserved]

(o) [Reserved]

(p) [Reserved]

SECTION II 40 CFR 60, Subpart Db—Standards of Performance for Industrial Commercial Institutional Steam Generating Units

Definitions contained in 40 CFR Part 60, Subpart Db, Section 41b are applicable to the Permittee.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

II.1 Standard for nitrogen oxides.[326 IAC 12] [40 CFR 60.44b]

(a) Pursuant to 40 CFR 60.44b(a), the Permittee that combusts only natural gas and/or distillate oil shall not cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO2) in excess of 0.10 lb/million Btu for any affected facility with a low heat release and 0.20 lb/million Btu for any affected facility with a high heat release.

(b) [Reserved]

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) Pursuant to 40 CFR 60.44b(h), for purposes of 40 CFR 60.44b(i), the nitrogen oxide standards in 40 CFR 60.44b apply at all times including periods of startup, shutdown, or malfunction.

(i) Pursuant to 40 CFR 60.44b(i), compliance with the emission limits under 40 CFR 60.44b are determined on a 30 day rolling average basis.

(j) [Reserved]

(k) [Reserved]

(l) [Reserved]

II.2 Emission monitoring for particulate matter and nitrogen oxides [326 IAC 12] [40 CFR 60.48b]

(a) [Reserved]

(b) Pursuant to 40 CFR 60.48b(b), except as provided under 40 CFR 60.48b(g) the Permittee shall comply with either 40 CFR 60.48b(b)(1) or 60.48b(b)(2).

(1) Install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere; or

(2) [Reserved]

(c) Pursuant to 40 CFR 60.48b(c), the continuous monitoring systems required under 40 CFR 60.48b(b) shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) Pursuant to 40 CFR 60.48b(d), the 1 hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by 40 CFR 60.48b(b) and required under 40 CFR 60.13(h) shall be expressed in ng/J or lb/million Btu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1 hour averages shall be calculated using the data points required under 40 CFR 60.13(b). At least 2 data points must be used to calculate each 1 hour average.

(e) Pursuant to 40 CFR 60.48b(e), the procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) [Reserved]

(2) For affected facilities combusting natural gas, the span value for nitrogen oxides is 500 PPM.

(3) [Reserved]

(f) Pursuant to 40 CFR 60.48b(f), when nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) Pursuant to 40 CFR 60.48b(g), the Permittee of an affected facility that has a heat input capacity of 73 MW (250 million Btu/hour) or less, and which has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of 40 CFR 60.48b(b), 60.48b(c), 60.48b(d), 60.48b(e)(2) and 60.48b(f), or

(2) [Reserved]

(h) [Reserved]

(i) [Reserved]

Compliance Determination Requirements

II.3 Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.[326 IAC 12] [40 CFR 60.46b]

(a) [Reserved]

(b) [Reserved]

(c) Pursuant to 40 CFR 60.46b(c), compliance with the nitrogen oxides emission standards under 40 CFR 60.44b shall be determined through performance testing under 40 CFR 60.46b(e).

(d) [Reserved]

(e) Pursuant to 40 CFR 60.46b(e), to determine compliance with the emission limits for nitrogen oxides required under 40 CFR 60.44b, the Permittee of an affected facility shall conduct the performance test as required under 40 CFR 60.8 using the continuous system for monitoring nitrogen oxides under 40 CFR 60.48(b).

(1) [Reserved]

(2) [Reserved]

(3) [Reserved]

(4) Following the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, the Permittee of an affected facility which has a heat input capacity of 73 MW (250 million Btu/hour) or less and which combusts natural gas, having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the nitrogen oxides standards under 40 CFR 60.44b through the use of a 30 day performance test. During periods when performance tests are not requested, nitrogen oxides emissions data collected pursuant to 40 CFR 60.48b(g)(1) or 40 CFR 60.48b(g)(2) are used to calculate a 30 day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the nitrogen oxides emission standards. A new 30 day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

(5) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) [Reserved]

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)][326 IAC 2-7-19]

II.4 Reporting and recordkeeping requirements [326 IAC 12] [40 CFR 60.49b]

(a) [Reserved]

(b) [Reserved]

(c) [Reserved]

(d) Pursuant to 40 CFR 60.49b(d), the Permittee of an affected facility shall record and maintain records of the amount of natural gas combusted during each day and calculate the annual capacity factor for natural gas for the reporting period. The annual capacity factor is determined on a 12 month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(e) [Reserved]

(f) [Reserved]

(g) Pursuant to 40 CFR 60.49b(g), the Permittee of an affected facility subject to the nitrogen oxides standards under 40 CFR 60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date.

(2) The average hourly nitrogen oxides emission rates (expressed as NO2) (ng/J or lb/million Btu heat input) measured or predicted.

(3) The 30 day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

(4) Identification of the steam generating unit operating days when the calculated 30 day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted.

(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

(h) Pursuant to 40 CFR 60.49b(h), the Permittee of any affected facility in any category listed in 60.49b(h)(2) is required to submit excess emission reports for any excess emissions which occurred during the reporting period.

(1) [Reserved]

(2) Any affected facility that is subject to the nitrogen oxides standard of 40 CFR 60.44b, and that

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less, or

(ii) Has a heat input capacity of 73 MW (250 million Btu/hour) or less and is required to monitor nitrogen oxides emissions on a continuous basis under 40 CFR 60.48b(g)(1).

(3) [Reserved]

(4) For purposes of 40 CFR 60.48b(g)(1), excess emissions are defined as any calculated 30 day rolling average nitrogen oxides emission rate, as determined under 40 CFR 60.46b(e), which exceeds the applicable emission limits in 40 CFR 60.44b.

(i) Pursuant to 40 CFR 60.49b(i), the Permittee shall submit reports containing the information recorded under 40 CFR 60.49b(g).

(j) [Reserved]

(k) [Reserved]

(l) [Reserved]

(m) [Reserved]

(n) [Reserved]

(o) [Reserved]

(p) [Reserved]

(q) [Reserved]

(r) [Reserved]

(s) [Reserved]

(t) [Reserved]

(u) [Reserved]

(v) Pursuant to 40 CFR 60.49b(v), the Permittee of an affected facility may submit electronic quarterly reports for SO2 and/or NOx and/or opacity in lieu of submitting the written reports required under 40 CFR 60.49b(h), or 60.49b(i). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the Permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR Part 60, Subpart Db was achieved during the reporting period. Before submitting reports in the electronic format, the Permittee shall coordinate with IDEM, OAQ to obtain their agreement to submit reports in this alternative format.

(w) Pursuant to 40 CFR 60.49b(w), the reporting period for the reports required under 40 CFR Part 60, Subpart Db is each 6 month period. All reports shall be submitted to IDEM, OAQ and shall be postmarked by the 30th day following the end of the reporting period.

SECTION JJ 40 CFR 63, Subpart TT --National Emission Standards for Equipment Leaks -- Control Level 1

Definitions contained in 40 CFR Part 63, Subpart TT, Section 1001 are applicable to the Permittee.

Emission Limitations and Standards

JJ.1 Compliance assessment [326 IAC 14][40 CFR 63.1002, Subpart JJ]

(a) Pursuant to 40 CFR 63.1002(a), compliance assessment; General procedures for compliance assessment. Compliance with 40 CFR Part 63, Subpart TT will be determined by review of the records required by 40 CFR 63.1017 and the reports required by 40 CFR 63.1018, by review of performance test results, and by inspections.

(b) Pursuant to 40 CFR 63.1002(b), alternative means of emission limitation. The provisions of 40 CFR 63.1002(b) do not apply to the performance standards of 40 CFR 63.1006(e)(4) for valves designated as having no detectable emissions, 40 CFR 63.1011(b) for pressure relief devices, or 40 CFR 63.1012(f) for compressors operating under the alternative compressor standard.

(1) The Permittee may request a determination of alternative means of emission limitation to the requirements of 40 CFR 63.1005 through 63.1015 as provided in 40 CFR 63.1002(b)(2) through 63.1002(b)(6). If IDEM, OAQ makes a determination that an alternative means of emission limitation is a permissible alternative, the Permittee shall comply with the alternative.

(2) Permission to use an alternative means of emission limitation shall be governed by the following procedures in 40 CFR 63.1002(b)(3) through 63.1002(b)(6) of 63.1002.

(3) Where the standard is an equipment, design, or operational requirement the criteria specified in 40 CFR 63.1002(b)(3)(i) and 63.1002(b)(3)(ii) shall be met.

(i) The Permittee applying for permission to use an alternative means of emission limitation shall be responsible for collecting and verifying emission performance test data for an alternative means of emission limitation.

(ii) IDEM, OAQ will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

(4) Where the standard is a work practice the criteria specified in 40 CFR 63.1002(b)(4)(i) through 63.1002(b)(4)(iv) shall be met.

(i) The Permittee applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation.

(ii) For each kind of equipment for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

(iii) IDEM, OAQ will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices.

(iv) IDEM, OAQ may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same or greater emission reduction as the required work practices of 40 CFR Part 63, Subpart TT.

(5) The Permittee may offer a unique approach to demonstrate the alternative means of emission limitation.

(6) If, in the judgement of US EPA and IDEM, OAQ an alternative means of emission limitation will be approved, US EPA will publish a notice of the determination in the Federal Register.

(7) (i) Manufacturers of equipment used to control equipment leaks of a regulated material may apply to IDEM, OAQ for permission for an alternative means of emission limitation that achieves a reduction in emissions of the regulated

material achieved by the equipment, design, and operational requirements of 40 CFR Part 63, Subpart TT.

(ii) IDEM OAQ will grant permission according to the provisions of 40 CFR 63.1002(b)(3), 63.1002(b)(4), 63.1002(b)(5) and 63.1002(b)(6).

JJ.2 Equipment identification [326 IAC 14][40 CFR 63.1003, Subpart JJ]

(a) Pursuant to 40 CFR 63.1003(a); General equipment identification. Equipment subject to 40 CFR Part 63, Subpart TT shall be identified. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, by designation of process unit or affected facility boundaries by some form of weatherproof identification, or by other appropriate methods.

(b) Pursuant to 40 CFR 63.1003(b); Additional equipment identification. In addition to the general identification required by 40 CFR 63.1003(a), equipment subject to any of the provisions in 40 CFR 63.1006 to 63.1015 shall be specifically identified as required in 40 CFR 63.1003(b)(1) through 63.1003(b)(5), as applicable.

(1) Connectors. Except for inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of 40 CFR 63.1008(d)(2) and instrumentation systems identified pursuant to 40 CFR 63.1008(b)(4), identify the connectors subject to the requirements of 40 CFR Part 63, Subpart TT. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of 40 CFR Part 63, Subpart TT are identified as a group, and the number of connectors subject is indicated.

(2) Routed to a process or fuel gas system or equipped with a closed vent system and control device. Identify the equipment that the Permittee elects to route to a process or fuel gas system or equip with a closed vent system and control device, under the provisions of 40 CFR 63.1007(e)(3) (pumps in light liquid service), 40 CFR 63.1009(e)(3) (agitators in gas and vapor service and in light liquid service), 40 CFR 63.1011(d) (pressure relief devices in gas and vapor service), 63.1012(e) (compressors), or 63.1016 (alternative means of emission limitation for enclosed vented process units).

(3) Pressure relief devices. Identify the pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.1011(e).

(4) Instrumentation systems. Identify instrumentation systems subject to the provisions of 40 CFR 63.1010. Individual components in an instrumentation system need not be identified.

(5) Equipment in service less than 300 hours per calendar year. The identity, either by list, location (area or group), or other method, of equipment in regulated material service less than 300 hours per calendar year within a process unit or affected facilities subject to the provisions of 40 CFR Part 63, Subpart TT shall be recorded.

(c) Pursuant to 40 CFR 63.1003(c); Special equipment designations: Equipment that is unsafe or difficult-to-monitor.

(1) Designation and criteria for unsafe-to-monitor. Valves meeting the provisions of 40 CFR 63.1006(e)(1), pumps meeting the provisions of 40 CFR 63.1007(e)(5), connectors meeting the provisions of 40 CFR 63.1008(d)(1), and agitators meeting the provisions of 40 CFR 63.1009(e)(7) may be designated unsafe-to-monitor if the Permittee determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements of 40 CFR Part 63, Subpart TT. Examples of an unsafe-to-monitor equipment include, but is not limited to, equipment under extreme pressure or heat.

(2) Designation and criteria for difficult-to-monitor. Valves meeting the provisions of 40 CFR 63.1006(e)(2) may be designated difficult-to-monitor if the provisions of 40 CFR 63.1003(c)(2)(i) apply. Agitators meeting the provisions of 40 CFR 63.1009(f)(5) may be designated difficult-to-monitor if the provisions of 40 CFR 63.1003(c)(2)(ii) apply.

(i) Valves.

(A) The Permittee of the valve determines that the equipment cannot be monitored without elevating the monitoring personnel more than 2

meters (7 feet) above a support surface or it is not accessible in a safe manner when it is in regulated material service.

(B) The process unit or affected facility within which the valve is located is an existing source, or the Permittee designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor.

(ii) Agitators. The Permittee determines that the agitator cannot be monitored without elevating the monitoring personnel more than 2 meters (7 feet) above a support surface or it is not accessible in a safe manner when it is in regulated material service.

(3) [Reserved]

(4) Identification of unsafe or difficult-to-monitor equipment. The Permittee shall record the identity of equipment designated as unsafe-to-monitor according to the provisions of 40 CFR 63.1003(c)(1) and the planned schedule for monitoring this equipment. The Permittee shall record the identity of equipment designated as difficult-to-monitor according to the provisions of 40 CFR 63.1003(c)(2), the planned schedule for monitoring this equipment, and an explanation why the equipment is difficult-to-monitor. This record must be kept at the plant and be available for review by an inspector.

(5) Written plan requirements.

(i) The Permittee of equipment designated as unsafe-to-monitor except connectors meeting the provisions of 40 CFR 63.1008(d)(1) according to the provisions of 40 CFR 63.1003(c)(1) shall have a written plan that requires monitoring of the equipment as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 40 CFR 63.1005 if a leak is detected.

(ii) The Permittee of equipment designated as difficult-to-monitor according to the provisions of 40 CFR 63.1003(c)(2) shall have a written plan that requires monitoring of the equipment at least once per calendar year, and repair of the equipment according to the procedures in 40 CFR 63.1005 if a leak is detected.

(d) Pursuant to 40 CFR 63.1003(d); Special equipment designations: Unsafe-to-repair.

(1) Designation and criteria. Connectors subject to the provisions of 40 CFR 63.1005(e) may be considered unsafe-to-repair if the Permittee determines that repair personnel would be exposed to an immediate danger as a consequence of complying with the repair requirements of 40 CFR Part 63, Subpart TT, and if the connector will be repaired before the end of the next process unit or affected facility shutdown as specified in 40 CFR 63.1005(e).

(2) Identification of equipment. The identity of connectors designated as unsafe-to-repair and an explanation why the connector is unsafe-to-repair shall be recorded.

(e) Pursuant to 40 CFR 63.1003(e); Special equipment designations: Equipment operating with no detectable emissions.

(1) Designation and criteria. Equipment may be designated as having no detectable emissions if it has no external actuating mechanism in contact with the process fluid and is operated with emissions less than 500 parts per million above background as determined by the method specified in 40 CFR 63.1004(b) and 63.1004(c).

(2) Identification of equipment. The identity of equipment designated as no detectable emissions shall be recorded.

(3) Identification of compressors operating under no detectable emissions. Identify the compressors that the Permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.1012(f).

JJ.3 Equipment identification [326 IAC 14][40 CFR 63.1004, Subpart JJ]

(a) Pursuant to 40 CFR 63.1004(a); Instrument and sensory monitoring for leaks. Monitoring for leaks. The Permittee of a regulated source subject to 40 CFR Part 62, Subpart TT shall monitor all regulated equipment as specified in 40 CFR 63.1004(a)(1) for instrument monitoring and 40 CFR 63.1004(a)(2) for sensory monitoring.

(1) Instrument monitoring for leaks.

(i) Valves in gas and vapor service and in light liquid service shall be monitored pursuant to 40 CFR 63.1006(b).

(ii) Pumps in light liquid service shall be monitored pursuant to 40 CFR 63.1007(b).

(iii) Connectors in gas and vapor service and in light liquid service shall be monitored pursuant to 40 CFR 63.1008(b).

(iv) Agitators in gas and vapor service and in light liquid service shall be monitored pursuant to 40 CFR 63.1009(b).

(v) Pressure relief devices in gas and vapor service shall be monitored pursuant to 40 CFR 63.1011(c).

(vi) Compressors designated to operate with an instrument reading less than 500 parts per million as described in 40 CFR 63.1003(e), shall be monitored pursuant to 40 CFR 63.1012(f).

(2) Sensory monitoring for leaks.

(i) Pumps in light liquid service shall be observed pursuant to 40 CFR 63.1007(b)(3) and 63.1007(e)(1)(v).

(ii) [Reserved]

(iii) Agitators in gas and vapor service and in light liquid service shall be observed pursuant to 40 CFR 63.1009(b)(3) or 63.1009(e)(1)(iv).

(iv) [Reserved]

(b) Pursuant to 40 CFR 63.1004(b); Instrument monitoring methods. Instrument monitoring, as required under 40 CFR Part 63, Subpart TT, shall comply with the requirements specified in 40 CFR 63.1004(b)(1) through 63.1004(b)(6).

(1) Monitoring method. Monitoring shall comply with Method 21 of 40 CFR Part 60, Appendix A.

(2) Detection instrument performance criteria.

(i) Except as provided for in 40 CFR 63.1004(b)(2)(ii), the detection instrument shall meet the performance criteria of Method 21 of 40 CFR Part 60, Appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the representative composition of the process fluid, and not for each individual HAP, VOC or other regulated material individual chemical compound in the stream. For process streams that contain nitrogen, air, water, or other inerts that are not regulated materials, the representative stream response factor shall be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.

(ii) If there is no instrument commercially available that will meet the performance criteria specified in 40 CFR 63.1004(b)(2)(i), the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in 40 CFR 63.1004(b)(2)(i).

(3) Detection instrument calibration procedure. The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR Part 60, Appendix A.

(4) Detection instrument calibration gas. Calibration gases shall be zero air (less than 10 parts per million of hydrocarbon in air); and a mixture of methane in air at a concentration of approximately, but less than, 10,000 parts per million; or a mixture of n-hexane in air at a concentration of approximately, but less than, 10,000 parts per million. A calibration gas other than methane in air or n-hexane in air may be used if the instrument does not respond to methane or n-hexane or if the instrument does not meet the performance criteria specified in 40 CFR 63.1004(b)(2)(i). In such cases, the calibration gas may be a mixture of one or more compounds to be measured in air.

(5) Monitoring performance. Monitoring shall be performed when the equipment is in regulated material service or is in use with any other detectable material.

(6) Monitoring data. Monitoring data obtained prior to the regulated source becoming subject to the referencing subpart that do not meet the criteria specified in 40 CFR 63.1004(b)(1) through 63.1004(b)(5) may still be used to initially qualify for less frequent monitoring under the provisions in 40 CFR 63.1006(a)(2), 63.1006(b)(3) or 63.1006(b)(4) for valves provided the departures from the criteria specified or from the specified monitoring frequency of 40 CFR 63.1006(b)(3) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of Section 3.1.2(a) of Method 21 of Appendix A of 40 CFR Part 60 instead of 40 CFR 63.1006(b)(2), or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in the referencing subpart. Failure to use a calibrated instrument is not considered a minor departure.

(c) Pursuant to 40 CFR 63.1004(c); Instrument monitoring using background adjustments. The Permittee may elect to adjust or not to adjust the instrument readings for background. If the Permittee elects not to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR 63.1004(b)(1) through 63.1004(b)(5). In such case, all instrument readings shall be compared directly to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with 40 CFR 63.1011(b) (pressure relief devices in gas and vapor service) or 40 CFR 63.1012(f) (compressors). If the Permittee elects to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR 63.1004(c)(1) through 63.1004(c)(4).

(1) The requirements of 40 CFR 63.1004(b)(1) through 63.1004(b)(5) shall apply.

(2) The background level shall be determined, using the procedures in Method 21 of 40 CFR Part 60, Appendix A.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible (as described in Method 21 of 40 CFR Part 60, Appendix A).

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared to the applicable leak definitions for the monitored equipment to determine whether there is a leak or to determine compliance with 40 CFR 63.1011(b) (pressure relief devices in gas and vapor service) or 40 CFR 63.1012(f) (compressors).

(d) Pursuant to 40 CFR 63.1004(d); Sensory monitoring methods. Sensory monitoring, as required under 40 CFR Part 63, Subpart TT, shall consist of detection of a potential leak to the atmosphere by visual, audible, olfactory, or any other detection method.

(e) Pursuant to 40 CFR 63.1004(e); Leaking equipment identification and records.

(1) When each leak is detected pursuant to the monitoring specified in 40 CFR 63.1004(a), a weatherproof and readily visible identification, marked with the equipment identification, shall be attached to the leaking equipment.

(2) When each leak is detected, the information specified in 40 CFR 63.1005(e) shall be recorded and kept pursuant to the referencing subpart.

JJ.4 Leak repair [326 IAC 14][40 CFR 63.1005, Subpart JJ]

(a) Pursuant to 40 CFR 63.1005(a); Leak repair schedule. The Permittee shall repair each leak detected no later than 15 calendar days after it is detected, except as provided in 40 CFR

63.1005(c) and 63.1005(d). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempt at repair for pumps includes, but is not limited to, tightening the packing gland nuts and/or ensuring that the seal flush is operating at design pressure and temperature. First attempt at repair for valves includes, but is not limited to, tightening the bonnet bolts, and/or replacing the bonnet bolts, and/or tightening the packing gland nuts, and/or injecting lubricant into the lubricated packing.

(b) Pursuant to 40 CFR 63.1005(b); Leak identification removal.

(1) Valves in gas/vapor and light liquid service. The leak identification on a valve in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR 63.1006(b), and no leak has been detected during that monitoring. The leak identification on a connector in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR 63.1008(b) and no leak has been detected during that monitoring.

(2) Other equipment. The identification that has been placed, pursuant to 40 CFR 63.1004(e), on equipment determined to have a leak, except for a valve in gas/vapor or light liquid service, may be removed after it is repaired.

(c) Pursuant to 40 CFR 63.1005(c); Delay of repair. Delay of repair can be used as specified in any of 40 CFR 63.1005(c)(1) through 63.1005(c)(5). The Permittee shall maintain a record of the facts that explain any delay of repairs and, where appropriate, why the repair was technically infeasible without a process unit shutdown.

(1) Delay of repair of equipment for which leaks have been detected is allowed if the repair is technically infeasible without a process unit or affected facility shutdown within 15 days after a leak is detected. Repair of this equipment shall occur as soon as practical, but not later than by the end of the next process unit or affected facility shutdown, except as provided in 40 CFR 63.1005(c)(5).

(2) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in regulated material service.

(3) Delay of repair for valves, connectors, and agitators is also allowed if the criteria specified in 40 CFR 63.1005(c)(3)(i) and 63.1005(c)(3)(ii) are met.

(i) The Permittee determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and

(ii) When repair procedures are effected, the purged material is collected and destroyed, or recovered in a control or recovery device, or routed to a fuel gas system or process complying with 40 CFR 63.1015 or 63.1002(b).

(4) Delay of repair for pumps is allowed if the criteria specified in 40 CFR 63.1005(c)(4)(i) and 63.1005(c)(4)(ii) are met.

(i) Repair requires replacing the existing seal design with a new system that the Permittee has determined will provide better performance or one of the specifications of 40 CFR 63.1005(c)(4)(i)(A) through 63.1005(c)(4)(i)(C) are met.

(A) A dual mechanical seal system that meets the requirements of 40 CFR 63.1007(e)(1) will be installed,

(B) A pump that meets the requirements of 40 CFR 63.1007(e)(2) will be installed; or

(C) A system that routes emissions to a process or a fuel gas system or a closed vent system and control device that meets the requirements of 40 CFR 63.1007(e)(3) will be installed.

(ii) Repair is to be completed as soon as practical, but not later than 6 months after the leak was detected.

(5) Delay of repair beyond a process unit or affected facility shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit or affected facility shutdown, and valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit or affected facility shutdown will not be allowed unless the third process unit or affected facility shutdown occurs sooner than 6 months after the first process unit or affected facility shutdown.

(d) Pursuant to 40 CFR 63.1005(d); Unsafe-to-repair connectors. Any connector that is designated, as described in 40 CFR 63.1003(d), as an unsafe-to-repair connector is exempt from the requirements of 40 CFR63.1008(c), and 63.1005(a).

(e) Pursuant to 40 CFR 63.1005(e); Leak repair records. For each leak detected, the information specified in 40 CFR 63.1005(e)(1) through 63.1005(e)(5) shall be recorded and maintained pursuant to the referencing subpart.

(1) The date of first attempt to repair the leak.

(2) The date of successful repair of the leak.

(3) Maximum instrument reading measured by Method 21 of 40 CFR Part 60, Appendix A at the time the leak is successfully repaired or determined to be nonrepairable.

(4) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak as specified in 40 CFR 63.1005(e)(4)(i) and 63.1005(e)(4)(ii).

(i) The Permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on site before depletion and the reason for depletion.

(5) Dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

JJ.5 Valves in gas and vapor service and in light liquid service standards [326 IAC 14] [40 CFR 63.1006, Subpart JJ]

(a) Pursuant to 40 CFR 63.1006(a); Compliance schedule.

(1) The Permittee shall comply with 40 CFR 63.1006 no later than the compliance dates specified in the referencing subpart.

(2) The use of monitoring data generated before the regulated source became subject to the referencing subpart to initially qualify for less frequent monitoring is governed by the provisions of 40 CFR 63.1004(b)(6).

(b) Pursuant to 40 CFR 63.1006(b); Leak detection. Unless otherwise specified in 40 CFR 63.1002(b), or 63.1016, or in 63.1006(e), or the referencing subpart, the Permittee shall monitor all valves at the intervals specified in 40 CFR 63.1006(b)(3) through 63.1006(b)(6) and shall comply with all other provisions of 63.1006.

(1) Monitoring method. The valves shall be monitored to detect leaks by the method specified in 40 CFR 63.1004(b) and 63.1004(c).

(2) Instrument reading that defines a leak. The instrument reading that defines a leak is 10,000 parts per million or greater.

(3) Monitoring period.

(i) Each valve shall be monitored monthly to detect leaks, except as provided in 40 CFR 63.1006(b)(3)(ii), 63.1006(e)(1), 63.1006(e)(2), and 63.1006(e)(4). The Permittee may otherwise elect to comply with one of the alternative standards in 40 CFR 63.1006(b)(5) or 63.1006(b)(6) as specified in 40 CFR 63.1006(b)(4).

(ii) (A) Any valve for which a leak is not detected for 2 successive months may be monitored the same month (first, second, or third month) of every quarter, beginning with the next quarter, until a leak is detected. The first quarterly monitoring shall occur less than 3 months following the last monthly monitoring.

(B) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(C) For purposes of 40 CFR 63.1006(b), quarter means a 3-month period with the first quarter concluding on the last day of the last full month during the 180 days following initial startup.

(4) Allowance of alternative standards. The Permittee may elect to comply with one of the alternatives specified in either 40 CFR 63.1006(b)(5) or 63.1006(b)(6) if the percentage of valves leaking is equal to or less than 2.0 percent as determined by the procedure in 40 CFR 63.1006(c). The Permittee must notify IDEM, OAQ before implementing one of the alternatives specified in either 40 CFR 63.1006(b)(5) or 63.1006(b)(6).

(5) Allowable percentage alternative. The Permittee choosing to comply with the allowable percentage alternative shall have an allowable percentage of leakers no greater than 2.0 percent for each affected facility or process unit and shall comply with 40 CFR 63.1006(b)(5)(i) and 63.1006(b)(5)(ii).

(i) A compliance demonstration for each affected facility or process unit or affected facility complying with 40 CFR 63.1006(b)(5) shall be conducted initially upon designation, annually, and at other times requested by IDEM, OAQ. For each such demonstration, all valves in gas and vapor and light liquid service within the affected facility or process unit shall be monitored within 1 week by the methods specified in 40 CFR 63.1004(b). If an instrument reading exceeds the equipment leak level specified in the referencing subpart, a leak is detected. The leak percentage shall be calculated as specified in 40 CFR 63.1006(c).

(ii) If the Permittee decides no longer to comply with 40 CFR 63.1006(b)(5), the Permittee must notify IDEM, OAQ in writing that the work practice standard described in 40 CFR 63.1006(b)(3) will be followed.

(6) Skip period alternatives. The Permittee may elect to comply with one of the alternative work practices specified in 40 CFR 63.1006(b)(6)(i) or 63.1006(b)(6)(ii). The Permittee electing to use one of these skip period alternatives shall comply with 40 CFR 63.1006(b)(6)(iii) and 63.1006(b)(6)(iv). Before using either skip period alternative, the Permittee shall initially comply with the requirements of 40 CFR 63.1006(b)(3). Monitoring data generated before the regulated source became subject to the referencing subpart that meets the criteria of either 40 CFR 63.1004(b)(1) through 63.1004(b)(5), or 63.1004(b)(6), may be used to initially qualify for skip period alternatives.

(i) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 as determined by the procedure in 40 CFR 63.1006(c), the Permittee may begin to monitor for leaks once every 6 months.

(ii) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 as determined by the procedure in 40 CFR 63.1006(c), the Permittee may begin to monitor for leaks once every year.

(iii) If the percent of valves leaking is greater than 2.0, the Permittee shall comply with 40 CFR 63.1006(b)(3), but can elect to comply with 63.1006(b)(6) if future percent of valves leaking is again equal to or less than 2.0.

(iv) The Permittee shall keep a record of the monitoring schedule and the percent of valves found leaking during each monitoring period.

(c) Pursuant to 40 CFR 63.1006(c); Percent leaking valves calculation—calculation basis and procedures.

(1) The Permittee shall decide no later than the compliance date of 40 CFR Part 63, Subpart TT, or upon revision of an operating permit whether to calculate percent leaking valves on a process unit or group of process units basis. Once the Permittee has decided, all subsequent percentage calculations shall be made on the same basis and this shall be the basis used for comparison with the subgrouping criteria specified in 40 CFR 63.1006(b)(5)(i).

(2) The percent of valves leaking shall be determined by dividing the sum of valves found leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements of 40 CFR 63.1006.

(d) Pursuant to 40 CFR 63.1006(d); Leak repair.

(1) If a leak is determined pursuant to 40 CFR 63.1006(b), 63.1006(e)(1), or 63.1006(e)(2), then the leak shall be repaired using the procedures in 40 CFR 63.1005, as applicable.

(2) After a leak determined pursuant to 40 CFR 63.1006(b) or 63.1006(e)(2) has been repaired, the valve shall be monitored at least once within the first 3 months after its repair. The monitoring required by 40 CFR 63.1006(b)(2) is in addition to the monitoring required to satisfy the definition of repair.

(i) The monitoring shall be conducted as specified in 40 CFR 63.1004(b) and 63.1004(c), as appropriate, to determine whether the valve has resumed leaking.

(ii) Periodic monitoring required by 40 CFR 63.1006(b) may be used to satisfy the requirements of 40 CFR 63.1006(d)(2)(ii), if the timing of the monitoring period coincides with the time specified in 40 CFR 63.1006(d)(2)(ii). Alternatively, other monitoring may be performed to satisfy the requirements of 40 CFR 63.1006(d)(2)(ii), regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in 40 CFR 63.1006(d)(2)(ii).

(iii) If a leak is detected by monitoring that is conducted pursuant to 40 CFR 63.1006(d)(2), the Permittee shall follow the provisions of 40 CFR 63.1006(d)(2)(iii)(A) and 63.1006(d)(2)(iii)(B), to determine whether that valve must be counted as a leaking valve for purposes of 40 CFR 63.1006(c).

(A) If the Permittee elected to use periodic monitoring required by 40 CFR 63.1006(b) to satisfy the requirements of 40 CFR 63.1006(d)(2), then the valve shall be counted as a leaking valve.

(B) If the Permittee elected to use other monitoring, prior to the periodic monitoring required by 40 CFR 63.1006(b), to satisfy the requirements of 40 CFR 63.1006(d)(2), then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

(e) Pursuant to 40 CFR 63.1006(e); Special provisions for valves.

(1) Unsafe-to-monitor valves. Any valve that is designated, as described in 40 CFR 63.1003(c)(1), as an unsafe-to-monitor valve, is exempt from the monitoring requirements of 40 CFR 63.1006(b), and the Permittee shall monitor the valve according to the written plan specified in 40 CFR 63.1003(c)(5).

(2) Difficult-to-monitor. Any valve that is designated, as described in 40 CFR 63.1003(c)(2), as a difficult-to-monitor valve, is exempt from the requirements of 40 CFR 63.1006(b), and the Permittee shall monitor the valve according to the written plan specified in 40 CFR 63.1003(c)(5).

(3) Less than 250 valves. Any equipment located at a plant site with fewer than 250 valves in regulated material service is exempt from the monthly monitoring specified in 40 CFR 63.1006(b)(3)(i). Instead, the Permittee shall monitor each valve in regulated material service for leaks once each quarter, or comply with 40 CFR 63.1006(b)(3)(ii)(A),

63.1006(b)(3)(ii)(B), or 63.1006(b)(3)(ii)(C) except as provided in 40 CFR 63.1006(e)(1) and 63.1006(e)(2).

(4) No detectable emissions.

(i) Any valve that is designated, as described in 40 CFR 63.1003(e), as having no detectable emissions is exempt from the requirements of 40 CFR 63.1006(b) through 63.1006(c) if the Permittee meets the criteria specified in 40 CFR 63.1006(e)(4)(i)(A) and 63.1006(e)(4)(i)(B).

(A) Tests the valve for operation with emissions less than 500 parts per million above background as determined by the method specified in 40 CFR 63.1004(c) initially upon designation, annually, and at other times requested by IDEM, OAQ, and

(B) Records the dates of each compliance demonstration, the background level measured during each compliance test, and the maximum instrument reading measured at the equipment during each compliance test.

(ii) A valve may not be designated or operated for no detectable emissions, as described in 40 CFR 63.1003(e), if the valve has an instrument reading greater than 500 parts per million above background.

JJ.6 Pumps in light liquid service standards [326 IAC 14][40 CFR 63.1007, Subpart JJ]

(a) Pursuant to 40 CFR 63.1007(a); Compliance schedule. The Permittee shall comply with 63.1007 no later than the compliance date specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1007(b); Leak detection. Unless otherwise specified in 40 CFR 63.1002(b), or 63.1016 or 40 CFR 63.1007(e), the Permittee shall monitor each pump monthly to detect leaks and shall comply with all other provisions of 40 CFR 63.1007.

(1) Monitoring method. The pumps shall be monitored to detect leaks by the method specified in 40 CFR 63.1004(b).

(2) Instrument reading that defines a leak. The instrument reading that defines a leak is 10,000 parts per million.

(3) Visual inspection. Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The Permittee shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal, a leak is detected. Unless the Permittee demonstrates (e.g., through instrument monitoring) that the indications of liquids dripping are due to a condition other than process fluid drips, the leak shall be repaired according to the procedures of 40 CFR 63.1007(b)(4).

(4) Visual inspection: Leak repair. Where a leak is identified by visual indications of liquids dripping, repair shall mean that the visual indications of liquids dripping have been eliminated.

(c) Pursuant to 40 CFR 63.1007(c); Percent leaking pumps calculation.

(1) The Permittee shall decide no later than the compliance date of 40 CFR Part 63 or upon revision of an operating permit whether to calculate percent leaking pumps on a process unit basis or group of process units basis. Once the Permittee has decided, all subsequent percentage calculations shall be made on the same basis.

(2) The number of pumps at a process unit shall be the sum of all the pumps in regulated material service, except that pumps found leaking in a continuous process unit or within 1 month after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(3) Percent leaking pumps shall be determined by the following equation:

$$\%P_L = \left(\left(P_L - P_S \right) / \left(P_T - P_S \right) \right) \times 100 \qquad [Eq.\ 1]$$

Where:

%PL = Percent leaking pumps

PL = Number of pumps found leaking as determined through monthly monitoring as required in 40 CFR 63.1007(b). Do not include results from inspection of unsafe-to-monitor pumps pursuant to 40 CFR 63.1007(e)(6)

PT = Total pumps in regulated material service, including those meeting the criteria in 40 CFR 63.1007(e)(1), 63.1007(e)(2), 63.1007(e)(3), and 63.1007(e)(6).

PS = Number of pumps leaking within 1 month of start-up during the current monitoring period.

(d) Pursuant to 40 CFR 63.1007(d); Leak repair. If a leak is detected pursuant to 40 CFR 63.1007(b), then the leak shall be repaired using the procedures in 40 CFR 63.1005, as applicable, unless otherwise specified in 40 CFR 63.1007(b)(4) for leaks identified by visual indications of liquids dripping.

(e) Pursuant to 40 CFR 63.1007(e); Special provisions for pumps.

(1) Dual mechanical seal pumps. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 63.1007(b), provided the requirements specified in 40 CFR 63.1007(e)(1)(i) through 63.1007(e)(1)(viii) are met.

(i) The Permittee determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both. The Permittee shall keep records at the plant of the design criteria and an explanation of the design criteria, and any changes to these criteria and the reasons for the changes. This record must be available for review by an inspector.

(ii) Each dual mechanical seal system shall meet the requirements specified in 40 CFR 63.1007(e)(1)(ii)(A) through 63.1007(e)(1)(ii)(C).

(A) Each dual mechanical seal system is operated with the barrier fluid at a pressure that is at all times (except periods of startup, shutdown, or malfunction) greater than the pump stuffing box pressure; or

(B) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR Part 63, Subpart SS; or

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(iii) The barrier fluid is not in light liquid service.

(iv) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(v) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The Permittee shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the Permittee shall follow the procedure specified in either 40 CFR 63.1007(e)(1)(v)(A) or 63.1007(e)(1)(v)(B) prior to the next required inspection.

(A) The Permittee shall monitor the pump as specified in 40 CFR 63.1004(b) to determine if there is a leak of regulated material in the barrier fluid; if an instrument reading of 10,000 parts per million or

greater is measured, a leak is detected and shall be repaired using the procedures in 40 CFR 63.1005; or

(B) The Permittee shall eliminate the visual indications of liquids dripping.

(vi) If indications of liquids dripping from the pump seal exceed the criteria established in 40 CFR 63.1007(e)(1)(i), or if based on the criteria established in 40 CFR 63.1007(e)(1)(i) of the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(vii) Each sensor as described in 40 CFR 63.1007(e)(1)(iv) is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

(viii) When a leak is detected pursuant to 40 CFR 63.1007(e)(1)(vi), it shall be repaired as specified in 40 CFR 63.1005.

(2) No external shaft. Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of 40 CFR 63.1007(b).

(3) Routed to a process or fuel gas system or equipped with a closed vent system. Any pump that is routed to a process or a fuel gas system or equipped with a closed vent system that captures and transports leakage from the pump to a control device meeting the requirements of 40 CFR 63.1015 is exempt from requirements of 40 CFR 63.1007(b).

(4) Unmanned plant site. Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR 63.1007(b)(3), and 63.1007(e)(1)(v), and the daily requirements of 40 CFR 63.1007(e)(1)(vii), provided that each pump is visually inspected as often as practical and at least monthly.

(5) Unsafe-to-monitor pumps. Any pump that is designated, as described in 40 CFR 63.1003(c)(1), as an unsafe-to-monitor pump is exempt from the requirements of 40 CFR 63.1007(b) and the requirements of 40 CFR 63.1005 and the Permittee shall monitor the pump according to the written plan specified in 40 CFR 63.1003(c)(5).

JJ.7 Connectors in gas and vapor service and in light liquid service standards [326 IAC 14] [40 CFR 63.1008, Subpart JJ]

(a) Pursuant to 40 CFR 63.1008(a); Compliance schedule. The Permittee shall comply with 40 CFR 63.1008 no later than the compliance dates specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1008(b); Leak detection. Unless otherwise specified in 40 CFR 63.1002(b), or 63.1016, or the referencing subpart, the Permittee shall monitor all connectors within 5 days by the method specified in 40 CFR 63.1004(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. No monitoring is required if the evidence of a potential leak is eliminated within 5 days. If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(c) Pursuant to 40 CFR 63.1008(c); Leak repair. If a leak is detected pursuant to 40 CFR 63.1008(b), then the leak shall be repaired using the procedures in 40 CFR 63.1005, as applicable.

(d) Pursuant to 40 CFR 63.1008(d); Special provisions for connectors.

(1) Unsafe-to-monitor connectors. Any connector that is designated, as described in 40 CFR 63.1003(c)(1), as an unsafe-to-monitor connector is exempt from the requirements of 40 CFR 63.1008(b) and the Permittee shall monitor according to the written plan specified in 40 CFR 63.1003(c)(5).

(2) Inaccessible, ceramic, or ceramic-lined connectors.

(i) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of 40 CFR 63.1008(b), the leak repair requirements of 40 CFR 63.1008(c), and the recordkeeping and reporting requirements of 40 CFR 63.1017 and 63.1018. An inaccessible connector is a connector that meets any of the provisions specified in 40 CFR 63.1008(d)(2)(i)(A) through 63.1008(d)(2)(i)(F), as applicable.

(A) Buried;

(B) Insulated in a manner that prevents access to the connector by a monitor probe;

(C) Obstructed by equipment or piping that prevents access to the connector by a monitor probe; or

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground.

(E) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold;

(F) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(ii) If any inaccessible ceramic or ceramic-lined connector is noted to have a leak by visual, audible, olfactory, or other means, the leak to the atmosphere shall be eliminated as soon as practical.

JJ.8 Agitators in gas and vapor service and in light liquid service standards [326 IAC 14] [40 CFR 63.1009, Subpart JJ]

(a) Pursuant to 40 CFR 63.1009(a); Compliance schedule. The Permittee shall comply with 40 CFR 63.1009 no later than the compliance dates specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1009(b); Leak detection.

(1) Monitoring method. Each agitator seal shall be monitored monthly to detect leaks by the methods specified in 40 CFR 63.1004(b), or 63.1016, except as provided in 63.1002(b) or 63.1009(e).

(2) Instrument reading that defines a leak. If an instrument reading equivalent of 10,000 parts per million or greater is measured, a leak is detected.

(3) Visual inspection. Each agitator seal shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. The Permittee shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the agitator seal, the Permittee shall follow the procedures specified in 40 CFR 63.1009(b)(3)(i) and 63.1009(b)(3)(ii) prior to the next required inspection.

(i) The Permittee shall monitor the agitator seal as specified in 40 CFR 63.1004(b) to determine if there is a leak of regulated material. If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected, and it shall be repaired using the procedures in 40 CFR 63.1009(d);

(ii) The Permittee shall eliminate the indications of liquids dripping from the agitator seal.

(c) [Reserved]

(d) Pursuant to 40 CFR 63.1009(d); Leak repair. If a leak is detected, then the leak shall be repaired using the procedures in 40 CFR 63.1005, as applicable.

(e) Pursuant to 40 CFR 63.1009(e); Special provisions for agitators.

(1) Dual mechanical seal. Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR 63.1009(b),

provided the requirements specified in 40 CFR 63.1009(e)(1)(i) through 63.1009(e)(1)(vi) are met.

(i) Each dual mechanical seal system shall meet the applicable requirement specified in 40 CFR 63.1009(e)(1)(i)(A), 63.1009(e)(1)(i)(B), or 63.1009(e)(1)(i)(C).

(A) Operated with the barrier fluid at a pressure that is at all times (except during periods of startup, shutdown, or malfunction) greater than the agitator stuffing box pressure; or

(B) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that meets the requirements of 40 CFR 63.1015; or

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(ii) The barrier fluid is not in light liquid service.

(iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(iv) Each agitator seal is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, the Permittee shall follow the procedure specified in either 40 CFR 63.1009(e)(1)(iv)(A) or 63.1009(e)(1)(iv)(B) prior to the next required inspection.

(A) The Permittee shall monitor the agitator seal shall as specified in 40 CFR 63.1004(b) to determine the presence of regulated material in the barrier fluid. If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected and it shall be repaired using the procedures in 40 CFR 63.1005; or

(B) The Permittee shall eliminate the visual indications of liquids dripping.

(v) Each sensor as described in 40 CFR 63.1009(e)(1)(iii) is observed daily or is equipped with an alarm unless the agitator seal is located within the boundary of an unmanned plant site.

(vi) The Permittee of each dual mechanical seal system shall meet the requirements specified in 40 CFR 63.1009(e)(1)(vi)(A) through 63.1009(e)(1)(vi)(D).

(A) The Permittee shall determine, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both.

(B) The Permittee shall keep records of the design criteria and an explanation of the design criteria; and any changes to these criteria and the reasons for the changes.

(C) If indications of liquids dripping from the agitator seal exceed the criteria established in 40 CFR 63.1009(e)(1)(vi)(A) and 63.1009(e)(1)(vi)(B), or if, based on the criteria established in 40 CFR 63.1009(e)(1)(vi)(A) and 63.1009(e)(1)(vi)(B), the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(D) When a leak is detected, it shall be repaired using the procedures in 40 CFR 63.1005.

(2) No external shaft. Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from the requirements of 40 CFR 63.1009(b).

(3) Routed to a process or fuel gas system or equipped with a closed vent system. Any agitator that is routed to a process or fuel gas system or equipped with a closed vent system that captures and transports leakage from the agitator to a control device meeting the requirements of 40 CFR 63.1015 is exempt from the monitoring requirements of 63.1009(b).

(4) Unmanned plant site. Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR 63.1009(b)(3) and 63.1009(e)(1)(iv), and the daily requirements of 40 CFR 63.1009(e)(1)(v), provided that each agitator is visually inspected as often as practical and at least monthly.

(5) Difficult-to-monitor agitator seals. Any agitator seal that is designated, as described in 40 CFR 63.1003(c)(2), as a difficult-to-monitor agitator seal is exempt from the requirements of 40 CFR 63.1009(b) and the Permittee shall monitor the agitator seal according to the written plan specified in 40 CFR 63.1003(c)(5).

(6) Equipment obstructions. Any agitator seal that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements of 40 CFR 63.1009(b).

(7) Unsafe-to-monitor agitator seals. Any agitator seal that is designated, as described in 40 CFR 63.1003(c)(1), as an unsafe-to-monitor agitator seal is exempt from the requirements of 40 CFR 63.1009(b) and the Permittee of the agitator seal monitors the agitator seal according to the written plan specified in 40 CFR 63.1003(c)(5).

JJ.9 Pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in liquid service; and instrumentation systems standards [326 IAC 14][40 CFR 63.1010, Subpart JJ]

(a) Pursuant to 40 CFR 63.1010(a); Compliance schedule. The Permittee shall comply with 63.1010 no later than the compliance dates specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1010(b); Leak detection.

(1) Monitoring method. Unless otherwise specified in 40 CFR 63.1002(b), or 63.1016, the Permittee shall comply with 40 CFR 63.1010(b)(1) and 63.1010(b)(2). Pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; and instrumentation systems shall be monitored within 5 calendar days by the method specified in 40 CFR 63.1004(b) if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in 40 CFR 63.1010(c), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.1004(b).

(2) Instrument reading that defines a leak. For systems monitored by the method specified in 40 CFR 63.1004(b), if an instrument reading of 10,000 parts per million or greater is measured, a leak is detected. If a leak is detected, it shall be identified pursuant to 40 CFR 63.1004(e) and repaired pursuant to 63.1005.

(c) Pursuant to 40 CFR 63.1010(c); Leak repair. If a leak is determined pursuant to 63.1010, then the leak shall be repaired using the procedures in 40 CFR 63.1005, as applicable. For equipment identified in 40 CFR 63.1010(b) that is not monitored by the method specified in 40 CFR 63.1004(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

JJ.10 Pressure relief devices in gas and vapor service standards [326 IAC 14][40 CFR 63.1011, Subpart JJ]

(a) Pursuant to 40 CFR 63.1011(a); Compliance schedule. The Permittee shall comply with 63.1011 no later than the compliance dates specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1011(b); Compliance standard. Except during pressure releases as provided for in 40 CFR 63.1011(c), each pressure relief device in gas or vapor service shall be operated with an instrument reading of less than 500 parts per million as measured by the method specified in 40 CFR 63.1004(c).

(c) Pursuant to 40 CFR 63.1011(c); Pressure relief requirements.

(1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million, as soon as practical, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.1011(d).

(2) The pressure relief device shall be monitored no later than five calendar days after the pressure release and being returned to regulated material service to confirm the condition indicated by an instrument reading of less than 500 parts per million, as measured by the method specified in 40 CFR 63.1004(c).

(3) The Permittee shall record the dates and results of the monitoring required by 40 CFR 63.1011(c)(2) following a pressure release including maximum instrument reading measured during the monitoring and the background level measured if the instrument reading is adjusted for background.

(d) Pursuant to 40 CFR 63.1011(d); Pressure relief devices routed to a process or fuel gas system or equipped with a closed vent system and control device. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system that captures and transports leakage from the pressure relief device to a control device meeting the requirements of 40 CFR 63.1015 is exempt from the requirements of 40 CFR 63.1011(b) and 63.1011(c).

(e) Pursuant to 40 CFR 63.1011(e); Rupture disk exemption. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of 40 CFR 63.1011(b) and 63.1011(c) provided the Permittee installs a replacement rupture disk upstream of the pressure relief device as soon as practical after each pressure release, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.1005(d).

JJ.11 Compressor standards [326 IAC 14][40 CFR 63.1012, Subpart JJ]

(a) Pursuant to 40 CFR 63.1012(a); Compliance schedule. The Permittee shall comply with 63.1012 no later than the compliance dates specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1012(b); Seal system standard. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.1002(b) and 63.1012(e) and 63.1012(f). Each compressor seal system shall meet the requirements specified in 40 CFR 63.1012(b)(1), 63.1012(b)(2), or 63.1012(b)(3).

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure at all times (except during periods of startup, shutdown, or malfunction); or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that meets the requirements of 40 CFR 63.1015; or

(3) Equipped with a closed-loop system that purges the barrier fluid directly into a process stream.

(c) Pursuant to 40 CFR 63.1012(c); Barrier fluid system. The barrier fluid shall not be in light liquid service. Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.

(d) Pursuant to 40 CFR 63.1012(d); Failure criterion and leak detection.

(1) The Permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion, a leak is detected and shall be repaired pursuant to 40 CFR 63.1005, as applicable.

(2) The Permittee shall keep records of the design criteria and an explanation of the design criteria; and any changes to these criteria and the reasons for the changes.

(e) Pursuant to 40 CFR 63.1012(e); Routed to a process or fuel gas system or equipped with a closed vent system and control device. A compressor is exempt from the requirements of 40 CFR

63.1012(b) through 63.1012(d) if it is equipped with a system to capture and transport leakage from the compressor drive shaft seal to a process or a fuel gas system or to a closed vent system that captures and transports leakage from the compressor to a control device meeting the requirements of 40 CFR 63.1015.

(f) Pursuant to 40 CFR 63.1012(f); Alternative compressor standard.

(1) Any compressor that is designated as described in 40 CFR 63.1003(e) as operating with no detectable emissions shall operate at all times with an instrument reading of less than 500 parts per million. A compressor so designated is exempt from the requirements of 40 CFR 63.1012(b) through 63.1012(d) if the compressor is demonstrated initially upon designation, annually, and at other times requested by IDEM, OAQ to be operating with an instrument reading of less than 500 parts per million as measured by the method specified in 40 CFR 63.1004(c). A compressor may not be designated or operated having an instrument reading of less than 500 parts per million as described in 40 CFR 63.1003(e) if the compressor has a maximum instrument reading greater than 500 parts per million.

(2) The Permittee shall record the dates and results of each compliance test including the background level measured and the maximum instrument reading measured during each compliance test.

(g) Pursuant to 40 CFR 63.1012(g); Reciprocating compressor exemption. Any existing reciprocating compressor in a process unit or affected facility that becomes an affected facility under provisions of 40 CFR 60.14 or 60.15 is exempt from 40 CFR 63.1012(b), 63.1012(c), and 63.1012(d) provided the Permittee demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of the above exempted of 40 CFR 63.1012.

JJ.12 Sampling connection systems standards [326 IAC 14][40 CFR 63.1013, Subpart JJ]

(a) Pursuant to 40 CFR 63.1013(a); Compliance schedule. The Permittee shall comply with 63.1013 no later than the compliance dates specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1013(b); Equipment requirement. Each sampling connection system shall be equipped with a closed purge, closed loop, or closed vent system, except as provided in 40 CFR 63.1013(d). Gases displaced during filling of the sample container are not required to be collected or captured.

(c) Pursuant to 40 CFR 63.1013(c); Equipment design and operation. Each closed-purge, closed-loop, or closed vent system except as provided in 40 CFR 63.1013(d) shall meet the applicable requirements specified in 40 CFR 63.1013(c)(1) through 63.1013(c)(5).

(1) The system shall return the purged process fluid directly to a process line or fuel gas system meeting the compliance determinations in 40 CFR 63.1015 or 63.1002(b) as appropriate; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that meets the requirements of 40 CFR 63.1015; or

(4) Collect, store, and transport the purged process fluid to a system or facility identified in 40 CFR 63.1013(c)(4)(i), 63.1013(c)(4)(ii), or 63.1013(c)(4)(iii).

(i) A waste management unit as defined in 40 CFR 63.111 or 40 CFR Part 63, Subpart G, if the waste management unit is complying with the provisions of 40 CFR Part 63, Subpart G, applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of 40 CFR Part 63, Subpart G, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR Part 63, Subpart G, applicable to subject wastewater steams provided the facility has a National Pollution Discharge Elimination System (NPDES) permit or sends the wastewater to an NPDES-permitted facility.

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR Part 261.

(5) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

(d) Pursuant to 40 CFR 63.1013(d); In-situ sampling systems. In-situ sampling systems and sampling systems without purges are exempt from the requirements of 40 CFR 63.1013(b) and 63.1013(c).

JJ.13 Open-ended valves or lines standards [326 IAC 14][40 CFR 63.1014, Subpart JJ]

(a) Pursuant to 40 CFR 63.1014(a); Compliance schedule. The Permittee shall comply with 63.1014 no later than the compliance dates specified in the referencing subpart.

(b) Pursuant to 40 CFR 63.1014(b); Equipment and operational requirements.

(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.1002(b) and 63.1014(c) and 63.1014(d). The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance. The operational provisions of 40 CFR 63.1014(b)(2) and 63.1014(b)(3) also apply.

(2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR 63.1014(b)(1) at all other times.

(c) Pursuant to 40 CFR 63.1014(c); Emergency shutdown exemption. Open-ended valves or lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR 63.1014(b).

(d) Pursuant to 40 CFR 63.1014(d); Polymerizing materials exemption. Open-ended valves or lines containing materials that would autocatalytically polymerize or, would present an explosion, serious over pressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in 40 CFR 63.1014(b) are exempt from the requirements of 63.1014(b).

JJ.14 Closed vent systems and control devices; or emissions routed to a fuel gas system or process [326 IAC 14][40 CFR 63.1015, Subpart JJ]

(a) Pursuant to 40 CFR 63.1015(a); Compliance schedule. The Permittee shall comply with 63.1015 no later than the compliance dates specified in the referencing subpart.

(b) Compliance standard.

(1) The Permittee who owns or operates closed vent systems and nonflare control devices to comply with provisions of 40 CFR Part 63, Subpart TT shall design and operate the closed vent system and nonflare control devices to reduce emissions of regulated material with an efficiency of 95 percent or greater or to reduce emissions of regulated material to a concentration of 20 parts per million by volume or, for an enclosed combustion device, to provide a minimum of 760°C (1400°F). The Permittee who owns or operates closed vent systems and nonflare control devices to comply with 40 CFR Part 63, Subpart TT shall comply with the provisions of 40 CFR Part 63, Subpart SS, except as provided in 63.1002(b).

(2) The Permittee who owns or operates closed vent systems and flares to comply with the provisions of 40 CFR Part 63, Subpart TT shall design and operate the flare as specified in 40 CFR Part 63, Subpart SS, except as provided in 40 CFR 63.1002(b).

(3) The Permittee who routs emissions from equipment leaks to a fuel gas system or process shall comply with the provisions of 40 CFR Part 63, Subpart SS, except as provided in 63.1002(b).

JJ.15 Alternative means of emission limitation: Enclosed-vented process units [326 IAC 14][40 CFR 63.1016, Subpart JJ]

(a) Pursuant to 40 CFR 63.1016(a); Use of closed vent system and control device. Process units of affected facilities or portions of process units of affected facilities enclosed in such a manner that all emissions from equipment leaks are routed to a process or fuel gas system or collected and vented through a closed vent system to a control device meeting the requirements of either 40 CFR 63.1015 or 63.1002(b) are exempt from the requirements of 40 CFR 63.1006 through 63.1014. The enclosure shall be maintained under a negative pressure at all times while the process unit or affected facility is in operation to ensure that all emissions are routed to a control device.

(b) Pursuant to 40 CFR 63.1016(b); Recordkeeping. The Permittee who chooses to comply with the requirements of 63.1016 shall maintain the records specified in 40 CFR 63.1016(b)(1) through 63.1016(b)(3).

(1) Identification of the process unit(s) or affected facilities and the regulated materials they handle.

(2) A schematic of the process unit or affected facility, enclosure, and closed vent system.

(3) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.

Record Keeping and Reporting Requirement

JJ.16 Recordkeeping requirements [326 IAC 14][40 CFR 63.1017, Subpart JJ]

(a) Pursuant to 40 CFR 63.1017(a); Recordkeeping system. The Permittee who owns or operates more than one regulated source subject to the provisions of 40 CFR Part 63, Subpart TT may comply with the recordkeeping requirements for these regulated sources in one recordkeeping system. The recordkeeping system shall identify each record by regulated source and the type of program being implemented (e.g., quarterly monitoring) for each type of equipment. The records required by 40 CFR Part 63, Subpart TT are summarized in 40 CFR 63.1017(b) and 63.1017(c).

(b) Pursuant to 40 CFR 63.1017(b); General equipment leak records.

(1) As specified in 40 CFR 63.1003(a) through 63.1003(d), the Permittee shall keep general and specific equipment identification if the equipment is not physically tagged and the Permittee is electing to identify the equipment subject to 40 CFR Part 63, Subpart TT through written documentation such as a log or other designation.

(2) The Permittee shall keep a written plan as specified in 40 CFR 63.1003(c)(5) for any equipment that is designated as unsafe or difficult-to-monitor.

(3) The Permittee shall maintain the identity and an explanation as specified in 40 CFR 63.1003(d)(1) for any equipment that is designated as unsafe-to-repair.

(4) As specified in 40 CFR 63.1003(e), the Permittee shall maintain the identity of compressors operating with an instrument reading of less than 500 parts per million.

(5) The Permittee shall keep records for leaking equipment as specified in 40 CFR 63.1004(e).

(6) The Permittee shall keep records for delay of repair as specified in 40 CFR 63.1005(c) and records for leak repair as specified in 63.1005(e).

(c) Pursuant to 40 CFR 63.1017(c); Specific equipment leak records.

(1) For valves, the Permittee shall maintain the monitoring schedule for each process unit as specified in 40 CFR 63.1006(b), and the records specified in 63.1006(e)(4)(i)(B).

(2) For pumps, the Permittee shall maintain the records specified in 40 CFR 63.1017(c)(2)(i) through 63.1017(c)(2)(iii).

(i) Documentation of pump visual inspections as specified in 40 CFR 63.1007(b)(4).

(ii) Documentation of dual mechanical seal pump visual inspections as specified in 40 CFR 63.1007(e)(1)(v).

(iii) For the criteria as to the presence and frequency of drips for dual mechanical seal pumps, records of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR 63.1007(e)(1)(i).

(3) [Reserved]

(4) For agitators, the Permittee shall maintain records specified in 40 CFR 63.1017(c)(4)(i) and 63.1017(c)(4)(ii).

(i) Documentation of the agitator seal visual inspections as specified in 40 CFR 63.1009(b)(3).

(ii) Documentation of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR 63.1009(e)(1)(vi)(A).

(5) For pressure relief devices in gas and vapor or light liquid service, the Permittee shall keep records of the dates and results of monitoring following a pressure release, as specified in 40 CFR 63.1011(c)(3).

(6) For compressors, the Permittee shall maintain the records specified in 40 CFR 63.1017(c)(6)(i) and 63.1017(c)(6)(ii).

(i) For criteria as to failure of the seal system and/or the barrier fluid system, record the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR 63.1012(d)(2).

(ii) For compressors operating under the alternative compressor standard, record the dates and results of each compliance test as specified in 40 CFR 63.1012(f)(2).

(7) For process units complying with the enclosed-vented process unit alternative, the Permittee shall maintain the records for enclosed-vented process units as specified in 40 CFR 63.1016(b).

JJ.17 Reporting requirements [326 IAC 14][40 CFR 63.1018, Subpart JJ]

(a) Pursuant to 40 CFR 63.1018(a); Periodic Reports. The Permittee shall report the information specified in 40 CFR 63.1018(a)(1) through 63.1018(a)(2), as applicable, in the periodic report specified in the referencing subpart.

(1) The initial Periodic Report shall include the information specified in 40 CFR 63.1018(a)(1)(i) through 63.1018(a)(1)(iv) and 63.1018(a)(2).

(i) Process unit or affected facility identification.

(ii) Number of valves subject to the requirements of 40 CFR 63.1006, excluding those valves designated for no detectable emissions under the provisions of 40 CFR 63.1006(e)(4).

(iii) Number of pumps subject to the requirements of 40 CFR 63.1007, excluding those pumps designated for no detectable emissions under the provisions of 40 CFR 63.1007(e)(2) and those pumps complying with the closed vent system provisions of 40 CFR 63.1007(e)(3).

(iv) Number of compressors subject to the requirements of 40 CFR 63.1012, excluding those compressors designated for no detectable emissions under the provisions of 40 CFR 63.1012(f) and those compressors complying with the closed vent system provisions of 40 CFR 63.1012(e).

(2) Each periodic report shall contain the information listed in 40 CFR 63.1018(a)(2)(i) through 63.1018(a)(2)(iv), as applicable.

(i) Process unit identification.

(ii) For each month during the semiannual reporting period,

(A) Number of valves for which leaks were detected as described in 40 CFR 63.1006(b),

(B) Number of valves for which leaks were not repaired as required in 40 CFR 63.1006(d),

(C) Number of pumps for which leaks were detected as described in 40 CFR 63.1007(b) and 63.1007(e)(1)(vi),

(D) Number of pumps for which leaks were not repaired as required in 40 CFR 63.1007(d) and 63.1007(e)(5),

(E) Number of compressors for which leaks were detected as described in 40 CFR 63.1012(d)(1),

(F) Number of compressors for which leaks were not repaired as required in 40 CFR 63.1012(d)(1), and

(G) The facts that explain each delay of repair and, where appropriate, why the repair was technically infeasible without a process unit or affected facility shutdown.

(iii) Dates of process unit or affected facility shutdowns which occurred within the periodic report reporting period.

(iv) Revisions to items reported according to 40 CFR 63.1018(a)(1) if changes have occurred since the initial report or subsequent revisions to the initial report.

(b) Pursuant to 40 CFR 63.1018(b); Special notifications. The Permittee electing to comply with either of the alternatives in 40 CFR 63.1006(b)(5) or 63.1006(b)(6) shall notify IDEM, OAQ of the alternative standard selected before implementing either of the provisions.

SECTION KK 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Definitions contained in 40 CFR Part 60, Subpart Kb, Section 111b are applicable to the Permittee.

Emission Limitations and Standards

KK.1 Standard for volatile organic compounds (VOC) [326 IAC 14][40 CFR 60.112b, Subpart Kb]

(a) The Permittee of each storage vessel either with a design capacity greater than or equal to 151 m3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m3 but less than 151 m3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam or liquid filled seal mounted in contact with the liquid (liquid mounted seal). A liquid mounted seal means a foam or liquid filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon type or double deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid mounted seal. Except as provided in 40 CFR 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in 40 CFR 60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in 40 CFR Part 60, Subpart VV, 60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (40 CFR 60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs 40 CFR 60.112b(a)(1), 60.112b(a)(2), or 60.112b(a)(3) as provided in 40 CFR 60.114b.

(b) [Reserved]

(c) [Reserved]

Compliance Determination Requirements

KK.2 Testing and procedures [326 IAC 14][40 CFR 60.113b, Subpart Kb]

(a) [Reserved]

(b) [Reserved]

(c) The Permittee of each source that is equipped with a closed vent system and control device as required in 40 CFR 60.112b(a)(3) or 60.112b(b)(2) (other than a flare) is exempt from 40 CFR 60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by IDEM, OAQ as an attachment to the notification required by 40 CFR 60.7(a)(1) or, if the facility is exempt from 40 CFR 60.7(a)(1), as an attachment to the notification required by 40 CFR 60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 ☐C is used to meet documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to IDEM, OAQ in accordance with 40 CFR 60.113b(c)(1), unless the plan was modified by IDEM, OAQ during the review process. In this case, the modified plan applies.

(d) [Reserved]

Record Keeping and Reporting Requirement

KK.3 Reporting and recordkeeping requirements [326 IAC 14][40 CFR 60.115b, Subpart Kb]

The Permittee of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records and furnish reports as required by 40 CFR 60.115b(a), 60.115b(b), or 60.115b(c) depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b. The Permittee shall keep copies of all reports and records required by 40 CFR 60.115b, except for the record required by 60.115b(c)(1), for at least 2 years. The record required by 60.115b(c)(1) will be kept for the life of the control equipment.

(a) [Reserved]

(b) [Reserved]

(c) After installing control equipment in accordance with 40 CFR 60.112b(a)(3) or 60.112b(b)(1) (closed vent system and control device other than a flare), the Permittee shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with 40 CFR 60.113b(c)(2).

(d) [Reserved]

KK.4 Monitoring of operations [326 IAC 14][40 CFR 60.116b, Subpart Kb]

(a) The Permittee shall keep copies of all records required by 40 CFR 60.116b, except for the record required by 40 CFR 60.116b(b), for at least 2 years. The record required by 40 CFR 60.116b(b) will be kept for the life of the source.

(b) The Permittee of each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

SECTION LL 40 CFR Part 63, Subpart JJJJ - National Emission Standards For Hazardous Air Pollutants: Paper and Other Web Coating

Definitions contained in 40 CFR Part 63, Subpart JJJJ, Section 3310 are applicable to the Permittee.

Emissions Limitations and Standards [326 IAC 2-7-5(1)]

LL.1 What emission standards must the Permittee meet? [326 IAC 14][40 CFR 63.3320, Subpart JJJJ]

(a) [Reserved]

(b) Pursuant to 40 CFR 63.3320(b), the Permittee must limit organic HAP emissions to the level specified in 40 CFR Part 63.3320(b)(1), 63.3320(b)(2), 63.3320(b)(3), or 63.3320(b)(4).

(1) No more than 5 percent of the organic HAP applied for each month (95 percent reduction) at existing affected sources, and no more than 2 percent of the organic HAP applied for each month (98 percent reduction) at new affected sources; or

(2) No more than 4 percent of the mass of coating materials applied for each month at existing affected sources, and no more than 1.6 percent of the mass of coating materials applied for each month at new affected sources; or

(3) No more than 20 percent of the mass of coating solids applied for each month at existing affected sources, and no more than 8 percent of the coating solids applied for each month at new affected sources.

(4) [Reserved]

(c) Pursuant to 40 CFR 63.3320(c), the Permittee must demonstrate compliance with 40 CFR Part 63, Subpart JJJJ by following the procedures in 40 CFR Part 63.3370.

Compliance Determination Requirements

LL.2 What performance tests must the Permittee conduct? [326 IAC 14][40 CFR 63.3360 Subpart JJJJ]

(a) Pursuant to 40 CFR 63.3360(a), the Permittee must conduct the performance test methods as follows if organic HAP on any individual web coating line or any group of web coating lines is controlled by:

(1) Limiting organic HAP or volatile matter content of coatings. The Permittee must determine the organic HAP or volatile matter and coating solids content of coating materials according to procedures in 40 CFR Part 63.3360(c) and 63.3360(d). The Permittee must determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to 40 CFR Part 63.3360(g).

(2) [Reserved]

(b) [Reserved]

(c) Pursuant to 40 CFR 63.3360(c), if the Permittee determines compliance with the emission standards in 40 CFR Part 63.3320 by means other than determining the overall organic HAP control efficiency of a control device, the Permittee must determine the organic HAP mass fraction of each coating material “as-purchased” by following one of the procedures in 40 CFR Parts 63.3360(c)(1) through 63.3360(c)(3), and determine the organic HAP mass fraction of each coating material “as-applied” by following the procedures in 40 CFR 63.3360(c)(4). If the organic HAP content values are not determined using the procedures in 40 CFR 63.3360(c)(1) through 63.3360(c)(3), the Permittee must submit an alternative test method for determining their values for approval by IDEM, OAQ in accordance with 40 CFR 63.7(f). The recovery efficiency of the test method must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(1) Method 311. The Permittee may test the coating material in accordance with Method 311 of 40 CFR Part 63, Appendix A. The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the Permittee. The organic HAP content must be calculated according to the criteria and procedures in 40 CFR 63.3360(c)(1)(i) through 63.3360(c)(1)(iii).

(i) Include each organic HAP determined to be present at greater than or equal to 0.1 mass percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 mass percent for other organic HAP compounds.

(ii) Express the mass fraction of each organic HAP according to 40 CFR 63.3360(c)(1)(i) as a value truncated to four places after the decimal point (for example, 0.3791).

(iii) Calculate the total mass fraction of organic HAP in the tested material by summing the counted individual organic HAP mass fractions and truncating the result to three places after the decimal point (for example, 0.763).

(2) Method 24. For coatings, determine the volatile organic content as mass fraction of nonaqueous volatile matter and use it as a substitute for organic HAP using Method 24 of 40 CFR Part 60, Appendix A. The Method 24 determination may be performed by the manufacturer of the coating and the results provided to the Permittee.

(3) Formulation data. The Permittee may use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the Permittee by the manufacturer of the material. In the event of an inconsistency between Method 311 (Appendix A of 40 CFR Part 63) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used.

(4) As-applied organic HAP mass fraction. If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied organic HAP mass fraction is equal to the as-purchased organic HAP mass fraction. Otherwise, the as-applied organic HAP mass fraction must be calculated using Equation 1a of 40 CFR 63.3370.

(d) Pursuant to 40 CFR 63.3360(d), if the Permittee determines compliance with the emission standards in 40 CFR 63.3320 by means other than determining the overall organic HAP control efficiency of a control device and the Permittee chooses to use the volatile organic content as a surrogate for the organic HAP content of coatings, the Permittee must determine the as-purchased volatile organic content and coating solids content of each coating material applied by following the procedures in 40 CFR 63.3360(d)(1) or 63.3360(d)(2), and the as-applied volatile organic content and coating solids content of each coating material by following the procedures in paragraph 40 CFR 63.3360(d)(3).

(1) Method 24. The Permittee may determine the volatile organic and coating solids mass fraction of each coating applied using Method 24 (40 CFR Part 60, Appendix A.) The Method 24 determination may be performed by the manufacturer of the material and the results provided to the Permittee. If these values cannot be determined using Method 24, the Permittee must submit an alternative technique for determining their values for approval by IDEM, OAQ.

(2) Formulation data. The Permittee may determine the volatile organic content and coating solids content of a coating material based on formulation data and may rely on volatile organic content data provided by the manufacturer of the material. In the event of any inconsistency between the formulation data and the results of Method 24 of 40 CFR Part 60, Appendix A, and the Method 24 results are higher, the results of Method 24 will govern.

(3) As-applied volatile organic content and coating solids content. If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied volatile organic content is equal to the as-purchased volatile content and the as-applied coating solids content is equal to the as-purchased coating solids content. Otherwise, the as-applied volatile organic content must be calculated using Equation 1b of 40 CFR 63.3370 and the as-applied coating solids content must be calculated using Equation 2 of 40 CFR 63.3370.

(e) [Reserved]

(f) [Reserved]

(g) Pursuant to 40 CFR 63.3360(g), the Permittee may choose to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere when determining compliance with the emission standards in 40 CFR 63.3320. If the Permittee chooses this option, the Permittee must develop a testing protocol to determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere and submit this protocol to IDEM, OAQ for approval. The Permittee must submit this testing protocol with a site-specific test plan under 40 CFR 63.7(f). If the Permittee intends to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere and demonstrate compliance according to 40 CFR 63.3370(c)(3), 63.3370(c)(4), 63.3370(c)(5), or 63.3370(d), then the test protocol must determine the mass of organic HAP retained in the coated web or otherwise not emitted to the atmosphere. Otherwise, compliance must be shown using the volatile organic matter content as a surrogate for the HAP content of the coatings.

(h) [Reserved]

LL.3 How does the Permittee demonstrate compliance with the emission standards? [326 IAC 14][40 CFR 63.3370 Subpart JJJJ]

(a) Pursuant to 40 CFR 63.3370(a), the Permittee must demonstrate compliance follows:

(1) If the Permittee chooses to demonstrate compliance with “as-purchased" compliant coating materials then the Permittee must demonstrate that:

(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-purchased. These procedures are set out in 40 CFR 63.3370(b); or.

(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-purchased. These procedures are set out in 40 CFR 63.3370(b).

(2) If the Permittee chooses to demonstrate compliance with ‘‘as-applied’’ compliant coating materials then the Permittee must demonstrate that:

(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-applied. These procedures are set out in 40 CFR 63.3370(c)(1). Use either Equation 1a or 1b of 40 CFR 63.3370 to determine compliance with 63.3320(b)(2) in accordance with 63.3370(c)(5)(i); or

(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied. These procedures are set out in 40 CFR 63.3370(c)(2). Use Equations 2 and 3 of 40 CFR 63.3370 to determine compliance with 63.3320(b)(3) in accordance with 63.3370(c)(5)(i); or

(iii) Monthly average of all coating materials used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and monthly average of all coating materials used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as applied on a monthly average basis. These procedures are set out in 40 CFR 63.3370(c)(3). Use Equation 4 of 63.3370 to determine compliance with 63.3320(b)(2) in accordance with 63.3370(c)(5)(ii); or

(iv) Monthly average of all coating materials used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and monthly average of all coating materials used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied on a monthly average basis. These

procedures are set out in 40 CFR 63.3370(c)(4). Use Equation 5 of 63.3370 to determine compliance with 63.3320(b)(3) in accordance with 63.3370(c)(5)(ii).

(3) If the Permittee chooses to demonstrate compliance by tracking total monthly organic HAP applied then the Permittee must demonstrate that:

(i) Total monthly organic HAP applied does not exceed the calculated limit based on emission limitations. To accomplish this follow the procedures set out in 40 CFR 63.3370(d). Show that total monthly HAP applied (Equation 6 of 63.3370) is less than the calculated equivalent allowable organic HAP (Equation 13a or b of 63.3370).

(4) [Reserved]

(5) [Reserved]

(6) [Reserved]

(b) Pursuant to 40 CFR 63.3370(b), as-purchased “compliant” coating materials.

(1) If the Permittee complies by using coating materials that individually meet the emission standards in 40 CFR 63.3320(b)(2) or 63.3320(b)(3), the Permittee must demonstrate that each coating material applied during the month at an existing affected source contains no more than 0.04 mass fraction organic HAP or 0.2 kg organic HAP per kg coating solids, and that each coating material applied during the month at a new affected source contains no more than 0.016 mass fraction organic HAP or 0.08 kg organic HAP per kg coating solids on an as-purchased basis as determined in accordance with 40 CFR 63.3360(c).

(2) The Permittee is in compliance with emission standards in 40 CFR 63.3320(b)(2) and 63.3320(b)(3) if each coating material applied at an existing affected source is applied as-purchased and contains no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and each coating material applied at a new affected source is applied as-purchased and contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

(c) Pursuant to 40 CFR 63.3370(c), if the Permittee complies by using coating materials that meet the emission standards in 40 CFR 63.3320(b)(2) or 63.3320(b)(3) as-applied, the Permittee must demonstrate compliance by following one of the procedures in 40 CFR 63.3370(c)(1) through 63.3370(c)(4). Compliance is determined in accordance with 40 CFR 63.3370(c)(5).

(1) To show that each coating material as-applied meets the mass fraction of coating material standard (40 CFR 63.3320(b)(2)), the Permittee must demonstrate that each coating material applied at an existing affected source during the month contains no more than 0.04 kg organic HAP per kg coating material applied, and each coating material applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material applied as determined in accordance with 40 CFR 63.3370(c)(1)(i) and 63.3370(c)(1)(ii). The Permittee must calculate the as-applied organic HAP content of as-purchased coating materials which are reduced, thinned, or diluted prior to application.

(i) Determine the organic HAP content or volatile organic content of each coating material applied on an as-purchased basis in accordance with 40 CFR 63.3360(c).

(ii) Calculate the as-applied organic HAP content of each coating material using Equation 1a of 40 CFR 63.3370:

$$C_{ahi} = \frac{\left(C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} \right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 1a}$$

Where:

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M^{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

or calculate the as-applied volatile organic content of each coating material using

Equation 1b of 40 CFR 63.3370:

$$C_{avi} = \frac{\left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 1b}$$

Where:

C_{avi} = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(2) To show that each coating material as-applied meets the mass fraction of coating solids standard (40 CFR 63.3320(b)(3)) the Permittee must demonstrate that each coating material applied at an existing affected source contains no more than 0.20 kg of organic HAP per kg of coating solids applied and each coating material applied at a new affected source contains no more than 0.08 kg of organic HAP per kg of coating solids applied. The Permittee must demonstrate compliance in accordance with 40 CFR 63.3370(c)(2)(i) and 63.3370(c)(2)(ii).

(i) Determine the as-applied coating solids content of each coating material following the procedure in 40 CFR 63.3360(d). The Permittee must calculate the as-applied coating solids content of coating materials which are reduced, thinned, or diluted prior to application, using Equation 2 of 40 CFR 63.3370:

$$C_{asi} = \frac{\left(C_{si}M_i + \sum_{j=1}^{q} C_{sij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 2}$$

Where:

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ii) Calculate the as-applied organic HAP to coating solids ratio using Equation 3 of 40 CFR 63.3370:

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \qquad \text{Eq. 3}$$

Where:

H_{si} = As-applied, organic HAP to coating solids ratio of coating material, i.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{asi} = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

(3) To show that the monthly average organic HAP content of all coating materials as-applied is less than the mass percent limit (40 CFR 63.3320(b)(2)) the Permittee must demonstrate that the monthly average as-applied organic HAP content of all coating materials applied at an existing affected source is less than 0.04 kg organic HAP per kg of coating material applied, and all coating materials applied at a new affected source are less than 0.016 kg organic HAP per kg of coating material applied, as determined by Equation 4 of 40 CFR 63.3370:

$$H_L = \frac{\sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq. 4}$$

Where:

H_L = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as kg organic HAP per kg of coating material applied, kg/kg.

p = Number of different coating materials applied in a month.

C^{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the Permittee chooses to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in 40 CFR 63.3370.

(4) To show that the monthly average organic HAP content of all coating materials as-applied is less than the mass fraction of coating solids limit (40 CFR 63.3320(b)(3)) the Permittee must demonstrate that the monthly average as-applied organic HAP content on the basis of coating solids applied of all coating materials applied at an existing affected source is less than 0.20 kg organic HAP per kg coating solids applied, and all coating materials applied at a new affected source are less than 0.08 kg organic HAP per kg coating solids applied, as determined by Equation 5 of 40 CFR 63.3370:

$$H_S = \frac{\sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}}{\sum_{i=1}^{p} C_{Si} M_i + \sum_{j=1}^{q} C_{Sij} M_{ij}} \qquad \text{Eq. 5}$$

Where:

H_s = Monthly average, as-applied, organic HAP to coating solids ratio, kg organic HAP/kg coating solids applied.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the Permittee chooses to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in 40 CFR 63.3370.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

(5) The affected source is in compliance with emission standards in 40 CFR 63.3320(b)(2) or 63.3320(b)(3) if:

(i) The organic HAP content of each coating material as-applied at an existing affected source is no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the organic HAP content of each coating material as-applied at a new affected source contains no more than

0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids; or

(ii) The monthly average organic HAP content of all as-applied coating materials at an existing affected source are no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the monthly average organic HAP content of all as-applied coating materials at a new affected source is no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

(d) Pursuant to 40 CFR 63.3370(d), the Permittee must demonstrate that the total monthly organic HAP applied as determined by Equation 6 of 40 CFR 63.3370 is less than the calculated equivalent allowable organic HAP as determined by Equation 13a or b in 40 CFR 63.3370(l):

$$H_m = \sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret} \qquad \text{Eq. 6}$$

Where:

H_m = Total monthly organic HAP applied, kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where the Permittee chooses to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in 40 CFR 63.3370.

(e) [Reserved]

(f) [Reserved]

(g) [Reserved]

(h) [Reserved]

(i) [Reserved]

(j) [Reserved]

(k) [Reserved]

(l) Pursuant to 40 CFR 63.3370(l), to determine monthly allowable organic HAP emissions for use in demonstrating compliance in accordance with 40 CFR 63.3370(d), 63.3370(h), 63.3370(i)(1)(x)(D), 63.3370(i)(2)(xi)(D), or 63.3370(k)(3)(iv), the Permittee will need to determine the amount of coating material applied at greater than or equal to 20 mass percent coating solids and the amount of coating material applied at less than 20 mass percent coating solids. The allowable organic HAP limit is then calculated based on coating material applied at greater than or equal to 20 mass percent coating solids complying with 0.2 kg organic HAP per kg coating solids at an existing affected source or 0.08 kg organic HAP per kg coating solids at a new affected source, and coating material applied at less than 20 mass percent coating solids complying with 4 mass percent organic

HAP at an existing affected source and 1.6 mass-percent organic HAP at a new affected source as follows:

(1) Determine the as-purchased mass of each coating material applied each month.

(2) Determine the as-purchased coating solids content of each coating material applied each month in accordance with 40 CFR 63.3360(d)(1).

(3) Determine the as-purchased mass fraction of each coating material which was applied at 20 mass percent or greater coating solids content on an as-applied basis.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to coating materials which were applied at less than 20 mass percent coating solids content on an as-applied basis each month.

(5) Calculate the monthly allowable organic HAP emissions using Equation 13a of 40 CFR 63.3370 for an existing affected source:

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i(1-G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Eq. 13a}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = mass of as-purchased coating material, i, applied in a month, kg.

G_i = Mass fraction of each coating material, i, which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

q = Number of different materials added to the coating material.

M_{Lj} = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

or Equation 13b of 40 CFR 63.3370 for a new affected source:

$$H_a = 0.08\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.016\left[\sum_{i=1}^{p} M_i(1-G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Eq. 13b}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

G_i = Mass fraction of each coating material, i, which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

q = Number of different materials added to the coating material.

M_{Lj} = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

LL.4 What notifications and reports must the Permittee submit? [326 IAC 14][40 CFR 63.3400, Subpart JJJJ]

(a) [Reserved]

(b) Pursuant to 40 CFR 63.3400(b), the Permittee must submit an initial notification as required by 40 CFR 63.9(b).

(1) Initial notification for existing affected sources must be submitted no later than 1 year before the compliance date specified in 40 CFR 63.3330(a).

(2) Initial notification for new and reconstructed affected sources must be submitted as required by 40 CFR 63.9(b).

(3) For the purpose of 40 CFR Part 63, Subpart JJJJ, a Title V or Part 70 permit application may be used in lieu of the initial notification required under 40 CFR 63.9(b), provided the same information is contained in the permit application as required by 40 CFR 63.9(b) and IDEM, OAQ to which the permit application has been submitted has an approved operating permit program under Part 70 of Chapter I and has received delegation of authority from the EPA to implement and enforce 40 CFR Part 63, Subpart JJJJ.

(4) If the Permittee chooses to use a permit application in lieu of an initial notification in accordance with 40 CFR 63.3400(b)(3), the permit application must be submitted by the same due date specified for the initial notification.

(c) Pursuant to 40 CFR 63.3400(c), the Permittee must submit a semiannual compliance report according to 40 CFR 63.3400(c)(1) and 63.3400(c)(2).

(1) Compliance report dates.

(i) The first compliance report must cover the period beginning on the compliance date that is specified for the affected source in 40 CFR 63.3330 and ending on June 30 or December 31, whichever date is the first date following the end of the calendar half immediately following the compliance date in 40 CFR 63.3330.

(ii) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the calendar half immediately following the compliance date that is specified for the affected source in 40 CFR 63.3330.

(iii) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iv) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(v) For each affected source that is subject to permitting regulations pursuant to 40 CFR Part 70 or 40 CFR Part 71, and the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), the Permittee may submit the first and subsequent compliance reports according to the dates IDEM, OAQ has established instead of according to the dates in 40 CFR 63.3400(c)(1)(i) through 63.3400(c)(1)(iv).

(2) The compliance report must contain the information in 40 CFR 63.3400(c)(2)(i) through 63.3400(c)(2)(vi):

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) If there are no deviations from any emission limitations (emission limit or operating limit) that apply to the Permittee, a statement that there were no deviations from the emission limitations during the reporting period, and that no CMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

(v) For each deviation from an emission limitation (emission limit or operating limit) that applies to the Permittee and that occurs at an affected source where a CEMS was not used to comply with the emission limitations in 40 CFR Part 63, Subpart JJJJ, the compliance report must contain the information in 40 CFR 63.3400(c)(2)(i) through 63.3400(c)(2)(iii), and:

(A) The total operating time of each affected source during the reporting period.

(B) Information on the number, duration, and cause of deviations (including unknown cause), if applicable, and the corrective action taken.

(C) Information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other calibration checks.

(vi) For each deviation from an emission limit occurring at an affected source where the Permittee is using a CEMS to comply with the emission limit in 40 CFR Part 63, Subpart JJJJ, the Permittee must include the information in 40 CFR 63.3400(c)(2)(i) through 63.3400(c)(2)(iii) and 63.3400(c)(2)(vi)(A) through 63.3400(c)(2)(vi)(J).

(A) The date and time that each malfunction started and stopped.

(B) The date and time that each CEMS and CPMS, if applicable, was inoperative except for zero (low-level) and high-level checks.

(C) The date and time that each CEMS and CPMS, if applicable, was out-of-control, including the information in 40 CFR 63.8(c)(8).

(D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(E) A summary of the total duration (in hours) of each deviation during the reporting period and the total duration of each deviation as a percent of the total source operating time during that reporting period.

(F) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(G) A summary of the total duration (in hours) of CEMS and CPMS downtime during the reporting period and the total duration of CEMS and CPMS downtime as a percent of the total source operating time during that reporting period.

(H) A breakdown of the total duration of CEMS and CPMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

(I) The date of the latest CEMS and CPMS certification or audit.

(J) A description of any changes in CEMS, CPMS, or controls since the last reporting period.

(d) Pursuant to 40 CFR 63.3400(d), the Permittee must submit a Notification of Performance Tests as specified in 40 CFR 63.7 and 63.9(e) if the Permittee is complying with the emission standard using a control device and the Permittee is required to conduct a performance test of the control device. The Notification of Performance Tests and the site-specific test plan required under 40 CFR 63.7(c)(2) must identify the operating parameters to be monitored to ensure that the capture efficiency of the capture system and the control efficiency of the control device determined during the performance test are maintained. Unless EPA or IDEM, OAQ objects to the parameter or requests changes, the Permittee may consider the parameter approved.

(e) Pursuant to 40 CFR 63.3400(e), the Permittee must submit a Notification of Compliance Status as specified in 40 CFR 63.9(h).

(f) [Reserved]

(g) [Reserved]

LL.5 What records must the Permittee keep? [326 IAC 14][40 CFR 63.3410, Subpart JJJJ]

(a) Pursuant to 40 CFR 63.3410(a), each Permittee of an affected source subject to 40 CFR 63.3410 must maintain the records specified in 40 CFR 63.3410(a)(1) and (2) on a monthly basis in accordance with the requirements of 40 CFR 63.10(b)(1):

(1) Records specified in 40 CFR 63.10(b)(2) of all measurements needed to demonstrate compliance with 40 CFR 63.3320, Subpart JJJJ, including:

(i) Continuous emission monitor data in accordance with the requirements of 40 CFR 63.3350(d);

(ii) Control device and capture system operating parameter data in accordance with the requirements of 40 CFR 63.3350(c), 63.3350(e), and 63.3350(f);

(iii) Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(c);

(iv) Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(d);

(v) Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of 40 CFR 63.3360(e) and 63.3360(f); and

(vi) Material usage, organic HAP usage, volatile matter usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of 40 CFR 63.3370(b), 63.3370(c), and 63.3370(d).

(2) Records specified in 40 CFR 63.10(c) for each CMS operated by the Permittee in accordance with the requirements of 63.3350(b).

(b) [Reserved]

SECTION MM 40 CFR Part 63, Subpart I - National Emission Standards For Organic Hazardous Air Pollutants For Certain Processes Subject To The Negotiated Regulation For Equipment Leaks

Definitions contained in 40 CFR Part 63, Subpart I, Section 191 are applicable to the Permittee.

Emissions Limitations and Standards [326 IAC 2-7-5(1)]

MM.1 Standard [326 IAC 14][40 CFR 63.192, Subpart I]

(a) [Reserved]

(b) [Reserved]

(c) [Reserved]

(d) [Reserved]

(e) [Reserved]

(f) Pursuant to 40 CFR 63.192(f), each Permittee of a source subject to 40 CFR Part 63, Subparts I and H shall keep copies of all applicable reports and records required by Subpart H for at least 2 years, except as otherwise specified in 40 CFR Part 63, Subpart H. If the Permittee submits copies of reports to the applicable EPA Regional Office, the Permittee is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of 40 CFR 63.10(a)(4)(ii) for submittal of copies of reports, the Permittee is not required to maintain copies of reports.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request.

(2) The Permittee subject to 40 CFR Part 63, Subparts I and H shall keep the records specified in 40 CFR 63.192(f)(2), as well as records specified in 40 CFR Part 63, Subpart H.

(i) Records of the occurrence and duration of each start up, shutdown, and malfunction of operation of a process subject to 40 CFR Part 63, Subpart I as specified in 40 CFR 63.190(b).

(ii) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with 40 CFR Part 63, Subparts I and H.

(iii) For each start up, shutdown, and malfunction, records that the procedures specified in the source's start up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. These records may take the form of a “checklist,” or other form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for the event.

(g) Pursuant to 40 CFR 63.192(g), all reports required under 40 CFR Part 63, Subpart H shall be sent to US EPA at the addresses listed in 40 CFR 63.13 of Subpart A.

(1) Wherever 40 CFR Part 63, Subpart A specifies “postmark” dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent on or before the specified date.

(2) If acceptable to the US EPA, IDEM, OAQ, and the Permittee of a source, reports may be submitted on electronic media.

(h) [Reserved]

(i) [Reserved]

SECTION NN **[Reserved]**

Section OO Subpart PPPP - National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products

Source: 69 FR 20990, Apr. 19, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.4480 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for plastic parts and products surface coating facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.4481 Am I subject to this subpart?

(a) Plastic parts and products include, but are not limited to, plastic components of the following types of products as well as the products themselves: Motor vehicle parts and accessories for automobiles, trucks, recreational vehicles; sporting and recreational goods; toys; business machines; laboratory and medical equipment; and household and other consumer products. Except as provided in paragraph (c) of this section, the source category to which this subpart applies is the surface coating of any plastic parts or products, as described in paragraph (a)(1) of this section, and it includes the subcategories listed in paragraphs (a)(2) through (5) of this section.

(1) Surface coating is the application of coating to a substrate using, for example, spray guns or dip tanks. When application of coating to a substrate occurs, then surface coating also includes associated activities, such as surface preparation, cleaning, mixing, and storage. However, these activities do not comprise surface coating if they are not directly related to the application of the coating. Coating application with handheld, non-refillable aerosol containers, touch-up markers, marking pens, or the application of paper film or plastic film which may be pre-coated with an adhesive by the manufacturer are not coating operations for the purposes of this subpart.

(2) The general use coating subcategory includes all surface coating operations that are not automotive lamp coating operations, thermoplastic olefin (TPO) coating operations, or assembled on-road vehicle coating operations.

(3) The automotive lamp coating subcategory includes the surface coating of plastic components of the body of an exterior automotive lamp including, but not limited to, headlamps, tail lamps, turn signals, and marker (clearance) lamps; typical coatings used are reflective argent coatings and clear topcoats. This subcategory does not include the coating of interior automotive lamps, such as dome lamps and instrument panel lamps.

(4) The TPO coating subcategory includes the surface coating of TPO substrates; typical coatings used are adhesion promoters, color coatings, clear coatings and topcoats. The coating of TPO substrates on fully assembled on-road vehicles is not included in the TPO coating subcategory.

(5) The assembled on-road vehicle coating subcategory includes surface coating of fully assembled motor vehicles and trailers intended for on-road use, including, but not limited to: automobiles, light-duty trucks, heavy duty trucks, and busses that have been repaired after a collision or otherwise repainted; fleet delivery trucks; and motor homes and other recreational vehicles (including camping trailers and fifth wheels). This subcategory also includes the incidental coating of parts, such as radiator grilles, that are removed from the fully assembled on-road vehicle to facilitate concurrent coating of all parts associated with the vehicle. The assembled on-road vehicle coating subcategory does not include the surface coating of plastic parts prior to their attachment to an on-road vehicle on an original equipment manufacturer's (OEM) assembly line. The assembled on-road vehicle coating subcategory also does not include the use of adhesives, sealants, and caulks used in assembling on-road vehicles. Body fillers used to correct small surface defects and rubbing compounds used to remove surface scratches are not considered coatings subject to this subpart.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.4482, that uses 378 liters (100 gallons (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of plastic parts and products defined in paragraph (a) of this section; and that is a major source, is located at a major source, or is part of a major source of emissions of HAP. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year. You do not need to include coatings that meet the definition of non-

HAP coating contained in §63.4581 in determining whether you use 378 liters (100 gallons) per year, or more, of coatings in the surface coating of plastic parts and products.

(c) This subpart does not apply to surface coating or a coating operation that meets any of the criteria of paragraphs (c)(1) through (17) of this section.

(1) A coating operation conducted at a facility where the facility uses only coatings, thinners and other additives, and cleaning materials that contain no organic HAP, as determined according to §63.3941(a).

(2) Surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building, and facility maintenance operations, or that occur at hobby shops that are operated for noncommercial purposes.

(3) The surface coating of plastic parts and products performed on-site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or the National Aeronautics and Space Administration, or the surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).

(4) Surface coating where plastic is extruded onto plastic parts or products to form a coating.

(5) Surface coating of magnet wire.

(6) In-mold coating operations or gel coating operations in the manufacture of reinforced plastic composite parts that meet the applicability criteria for reinforced plastics composites production (subpart WWWW of this part).

(7) Surface coating of plastic components of wood furniture that meet the applicability criteria for wood furniture manufacturing (subpart JJ of this part).

(8) Surface coating of plastic components of large appliances that meet the applicability criteria for large appliance surface coating (subpart NNNN of this part).

(9) Surface coating of plastic components of metal furniture that meet the applicability criteria for metal furniture surface coating (subpart RRRR of this part).

(10) Surface coating of plastic components of wood building products that meet the applicability criteria for wood building products surface coating (subpart QQQQ of this part).

(11) Surface coating of plastic components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework (40 CFR part 63, subpart GG).

(12) Surface coating of plastic parts intended for use in an aerospace vehicle or component using specialty coatings as defined in appendix A to subpart GG of this part.

(13) Surface coating of plastic components of ships that meet the applicability criteria for shipbuilding and ship repair (subpart II of this part).

(14) Surface coating of plastic using a web coating process that meets the applicability criteria for paper and other web coating (subpart JJJJ of this part).

(15) Surface coating of fiberglass boats or parts of fiberglass boats (including, but not limited to, the use of assembly adhesives) where the facility meets the applicability criteria for boat manufacturing (subpart VVVV of this part), except where the surface coating of the boat is a post-mold coating operation performed on personal watercraft or parts of personal watercraft. This subpart does apply to post-mold coating operations performed on personal watercraft and parts of personal watercraft.

(16) Surface coating of plastic components of automobiles and light-duty trucks that meet the applicability criteria in §63.3082(b) of the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) at a facility that meets the applicability criteria in §63.3081(b).

(17) Screen printing.

(d) If your facility meets the applicability criteria in §63.3081(b) of the Surface Coating of Automobiles and Light-

Duty Trucks NESHAP (40 CFR part 63, subpart IIII) and you perform surface coating of plastic parts or products that meets both the applicability criteria in §63.3082(c) and the applicability criteria of this subpart, then for the surface coating of any or all of your plastic parts or products that meets the applicability criteria in §63.3082(c), you may choose to comply with the requirements of subpart IIII of this part in lieu of complying with this subpart. Surface coating operations on plastic parts or products (e.g., parts for motorcycles or lawnmowers) not intended for use in automobiles, light-duty trucks, or other motor vehicles as defined in §63.3176 cannot be made part of your affected source under subpart IIII of this part.

(e) If you own or operate an affected source that meets the applicability criteria of this subpart and at the same facility you also perform surface coating that meets the applicability criteria of any other final surface coating NESHAP in this part, you may choose to comply as specified in paragraph (e)(1), (2), or (3) of this section.

(1) You may have each surface coating operation that meets the applicability criteria of a separate NESHAP comply with that NESHAP separately.

(2) You may comply with the emission limitation representing the predominant surface coating activity at your facility, as determined according to paragraphs (e)(2)(i) and (ii) of this section. However, you may not establish assembled on-road vehicle or automotive lamp coating operations as the predominant activity. You must not consider any surface coating activity that is subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining the predominant surface coating activity at your facility.

(i) If a surface coating operation accounts for 90 percent or more of the surface coating activity at your facility (that is, the predominant activity), then compliance with the emission limitations of the predominant activity for all surface coating operations constitutes compliance with these and other applicable surface coating NESHAP. In determining predominant activity, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(ii) You must use kilogram (kg) (pound (lb)) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative mass of coating solids used from parameters other than coating consumption and mass solids content (*e.g.,* design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and mass solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.4510(b). You must also determine predominant activity annually and include the determination in the next semi-annual compliance report required by §63.4520(a).

(3) You may comply with a facility-specific emission limit calculated from the relative amount of coating activity that is subject to each emission limit. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this subpart and other applicable surface coating NESHAP. The procedures for calculating the facility-specific emission limit are specified in §63.4490. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of other surface coating NESHAP and constitute more than 1 percent of total coating activities at your facility. You must not consider any surface coating activity that is subject to the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (40 CFR part 63, subpart IIII) in determining a facility-specific emission limit for your facility. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of total coating activities need not be included in the calculation of the facility-specific emission limit but must be included in the compliance calculations.

[69 FR 20990, Apr. 19, 2004, as amended at 69 FR 22660, April 26, 2004; 71 FR 76927, Dec. 22, 2006; 72 FR 20237, Apr. 24, 2007]

§ 63.4482 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, and existing affected source within each of the four subcategories listed in §63.4481(a).

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (4) of this section that are used for surface coating of plastic parts and products within each subcategory.

(1) All coating operations as defined in §63.4581;

(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(c) An affected source is a new source if it meets the criteria in paragraph (c)(1) of this section and the criteria in either paragraph (c)(2) or (3) of this section.

(1) You commenced the construction of the source after December 4, 2002 by installing new coating equipment.

(2) The new coating equipment is used to coat plastic parts and products at a source where no plastic parts surface coating was previously performed.

(3) The new coating equipment is used to perform plastic parts and products coating in a subcategory that was not previously performed.

(d) An affected source is reconstructed if you meet the criteria as defined in §63.2.

(e) An affected source is existing if it is not new or reconstructed.

§ 63.4483 When do I have to comply with this subpart?

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) through (c) of this section. The compliance date begins the initial compliance period during which you conduct the initial compliance demonstration described in §§63.4540, 63.4550, and 63.4560.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section:

(1) If the initial startup of your new or reconstructed affected source is before April 19, 2004, the compliance date is April 19, 2004.

(2) If the initial startup of your new or reconstructed affected source occurs after April 19, 2004, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is the date 3 years after April 19, 2004.

(c) For an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP emissions, the compliance date is specified in paragraphs (c)(1) and (2) of this section.

(1) For any portion of the source that becomes a new or reconstructed affected source subject to this subpart, the compliance date is the date of initial startup of the affected source or April 19, 2004, whichever is later.

(2) For any portion of the source that becomes an existing affected source subject to this subpart, the compliance date is the date 1 year after the area source becomes a major source or 3 years after April 19, 2004, whichever is later.

(d) You must meet the notification requirements in §63.4510 according to the dates specified in that section and in subpart A of this part. Some of the notifications must be submitted before the compliance dates described in paragraphs (a) through (c) of this section.

Emission Limitations

§ 63.4490 What emission limits must I meet?

(a) For a new or reconstructed affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (a)(1) through (4) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.4541, §63.4551, or §63.4561.

(1) For each new general use coating affected source, limit organic HAP emissions to no more than 0.16 kg (0.16 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(2) For each new automotive lamp coating affected source, limit organic HAP emissions to no more than 0.26 kg (0.26 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(3) For each new TPO coating affected source, limit organic HAP emissions to no more than 0.22 kg (0.22 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(4) For each new assembled on-road vehicle coating affected source, limit organic HAP emissions to no more than 1.34 kg (1.34 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(b) For an existing affected source, you must limit organic HAP emissions to the atmosphere from the affected source to the applicable limit specified in paragraphs (b)(1) through (4) of this section, except as specified in paragraph (c) of this section, determined according to the requirements in §63.4541, §63.4551, or §63.4561.

(1) For each existing general use coating affected source, limit organic HAP emissions to no more than 0.16 kg (0.16 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(2) For each existing automotive lamp coating affected source, limit organic HAP emissions to no more than 0.45 kg (0.45 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(3) For each existing TPO coating affected source, limit organic HAP emissions to no more than 0.26 kg (0.26 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(4) For each existing assembled on-road vehicle coating affected source, limit organic HAP emissions to no more than 1.34 kg (1.34 lb) organic HAP emitted per kg (lb) coating solids used during each 12-month compliance period.

(c) If your facility's surface coating operations meet the applicability criteria of more than one of the subcategory emission limits specified in paragraphs (a) or (b) of this section, you may comply separately with each subcategory emission limit or comply using one of the alternatives in paragraph (c)(1) or (2) of this section.

(1) If the general use or TPO surface coating operations subject to only one of the emission limits specified in paragraphs (a)(1), (a)(3), (b)(1), or (b)(3) of this section account for 90 percent or more of the surface coating activity at your facility (*i.e.,* it is the predominant activity at your facility), then compliance with that emission limitation for all surface coating operations constitutes compliance with the other applicable emission limitations. You must use kg (lb) of solids used as a measure of relative surface coating activity over a representative period of operation. You may estimate the relative mass of coating solids used from parameters other than coating consumption and mass solids content (*e.g.,* design specifications for the parts or products coated and the number of items produced). The determination of predominant activity must accurately reflect current and projected coating operations and must be verifiable through appropriate documentation. The use of parameters other than coating consumption and mass solids content must be approved by the Administrator. You may use data for any reasonable time period of at least 1 year in determining the relative amount of coating activity, as long as they represent the way the source will continue to operate in the future and are approved by the Administrator. You must determine the predominant activity at your facility and submit the results of that determination with the initial notification required by §63.4510(b). Additionally, you must determine the facility's predominant activity

annually and include the determination in the next semi-annual compliance report required by §63.4520(a).

(2) You may calculate and comply with a facility-specific emission limit as described in paragraphs (c)(2)(i) through (iii) of this section. If you elect to comply using the facility-specific emission limit alternative, then compliance with the facility-specific emission limit and the emission limitations in this subpart for all surface coating operations constitutes compliance with this and other applicable surface coating NESHAP. In calculating a facility-specific emission limit, you must include coating activities that meet the applicability criteria of the other subcategories and constitute more than 1 percent of total coating activities. Coating activities that meet the applicability criteria of other surface coating NESHAP but comprise less than 1 percent of coating activities need not be included in the determination of predominant activity but must be included in the compliance calculation.

(i) You are required to calculate the facility-specific emission limit for your facility when you submit the notification of compliance status required in §63.4510(c), and on a monthly basis afterward using the coating data for the relevant 12-month compliance period.

(ii) Use Equation 1 of this section to calculate the facility-specific emission limit for your surface coating operations for each 12-month compliance period.

$$Facility-Specific\ \text{Emission Limit} = \frac{\sum_{i=1}^{n}(\text{Limit}_i)(Solids_i)}{\sum_{i=1}^{n}(Solids_i)} \qquad (Eq.\ 1)$$

Where:

Facility-specific emission limit = Facility-specific emission limit for each 12-month compliance period, kg (lb) organic HAP per kg (lb) coating solids used.

Limit_i= The new source or existing source emission limit applicable to coating operation, i, included in the facility-specific emission limit, converted to kg (lb) organic HAP per kg (lb) coating solids used, if the emission limit is not already in those units. All emission limits included in the facility-specific emission limit must be in the same units.

Solids_i= The kg (lb) of solids used in coating operation, i, in the 12-month compliance period that is subject to emission limit, i. You may estimate the mass of coating solids used from parameters other than coating consumption and mass solids content (*e.g.,* design specifications for the parts or products coated and the number of items produced). The use of parameters other than coating consumption and mass solids content must be approved by the Administrator.

n = The number of different coating operations included in the facility-specific emission limit.

(iii) If you need to convert an emission limit in another surface coating NESHAP from kg (lb) organic HAP per liter (gallon) coating solids used to kg (lb) organic HAP per kg (lb) coating solids used, you must use the default solids density of 1.50 kg solids per liter coating solids (12.5 lb solids per gal solids).

§ 63.4491 What are my options for meeting the emission limits?

You must include all coatings (as defined in §63.4581), thinners and/or other additives, and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit in §63.4490. To make this determination, you must use at least one of the three compliance options listed in paragraphs (a) through (c) of this section. You may apply any of the compliance options to an individual coating operation, or to multiple coating operations as a group, or to the entire affected source. You may use different compliance options for different coating operations, or at different times on the same coating operation. You may employ different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, you may not use different compliance options at the same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document this switch as required by §63.4530(c), and you must report it in the next semiannual compliance report required in §63.4520.

(a) *Compliant material option.* Demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the applicable emission limit in §63.4490, and that each thinner and/or other additive, and cleaning material used contains no organic HAP. You must meet all the requirements of §§63.4540, 63.4541, and 63.4542 to demonstrate compliance with the applicable emission limit using this option.

(b) *Emission rate without add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.4490, calculated as a rolling 12-month emission rate and determined on a monthly basis. You must meet all the requirements of §§63.4550, 63.4551, and 63.4552 to demonstrate compliance with the emission limit using this option.

(c) *Emission rate with add-on controls option.* Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation(s), and the emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation(s) is less than or equal to the applicable emission limit in §63.4490, calculated as a rolling 12-month emission rate and determined on a monthly basis. If you use this compliance option, you must also demonstrate that all emission capture systems and add-on control devices for the coating operation(s) meet the operating limits required in §63.4492, except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j), and that you meet the work practice standards required in §63.4493. You must meet all the requirements of §§63.4560 through 63.4568 to demonstrate compliance with the emission limits, operating limits, and work practice standards using this option.

§ 63.4492 What operating limits must I meet?

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any operating limits.

(b) For any controlled coating operation(s) on which you use the emission rate with add-on controls option, except those for which you use a solvent recovery system and conduct a liquid-liquid material balance according to §63.4561(j), you must meet the operating limits specified in Table 1 to this subpart. These operating limits apply to the emission capture and control systems on the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in §63.4567. You must meet the operating limits at all times after you establish them.

(c) If you use an add-on control device other than those listed in Table 1 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under §63.8(f).

§ 63.4493 What work practice standards must I meet?

(a) For any coating operation(s) on which you use the compliant material option or the emission rate without add-on controls option, you are not required to meet any work practice standards.

(b) If you use the emission rate with add-on controls option, you must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners and/or other additives, and cleaning materials used in, and waste materials generated by the controlled coating operation(s) for which you use this option; or you must meet an alternative standard as provided in paragraph (c) of this section. The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

(1) All organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be stored in closed containers.

(2) Spills of organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be minimized.

(3) Organic-HAP-containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.

(4) Mixing vessels which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.

(5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.

(c) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the work practice standards in this section.

General Compliance Requirements

§ 63.4500 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations in this subpart as specified in paragraphs (a)(1) and (2) of this section.

(1) Any coating operation(s) for which you use the compliant material option or the emission rate without add-on controls option, as specified in §63.4491(a) and (b), must be in compliance with the applicable emission limit in §63.4490 at all times.

(2) Any coating operation(s) for which you use the emission rate with add-on controls option, as specified in §63.4491(c), must be in compliance with the emission limitations as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) The coating operation(s) must be in compliance with the applicable emission limit in §63.4490 at all times except during periods of startup, shutdown, and malfunction.

(ii) The coating operation(s) must be in compliance with the operating limits for emission capture systems and add-on control devices required by §63.4492 at all times except during periods of startup, shutdown, and malfunction, and except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j).

(iii) The coating operation(s) must be in compliance with the work practice standards in §63.4493 at all times.

(b) You must always operate and maintain your affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subpart, according to the provisions in §63.6(e)(1)(i).

(c) If your affected source uses an emission capture system and add-on control device, you must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3). The plan must address the startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan must also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures.

[69 FR 20990, Apr. 19, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

§ 63.4501 What parts of the General Provisions apply to me?

Table 2 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

Notifications, Reports, and Records

§ 63.4510 What notifications must I submit?

(a) *General.* You must submit the notifications in §§63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) that apply to you by the dates specified in those sections, except as provided in paragraphs (b) and (c) of this section.

(b) *Initial notification.* You must submit the initial notification required by §63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after April 19, 2004, whichever is later. For an existing affected source, you must submit the initial notification no later than 1 year after April 19, 2004. If you are using compliance with the Surface Coating of Automobiles and Light-Duty Trucks NESHAP (subpart IIII of this part) as provided for under §63.4481(d) to constitute compliance with this subpart for any or all of your plastic parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those plastic parts coating operations. If you are complying with another NESHAP that constitutes the predominant activity at your facility under §63.4481(e)(2) to constitute compliance with this subpart for your plastic parts coating operations, then you must include a statement to this effect in your initial notification, and no other notifications are required under this subpart in regard to those plastic parts coating operations.

(c) *Notification of compliance status.* You must submit the notification of compliance status required by §63.9(h) no later than 30 calendar days following the end of the initial compliance period described in §63.4540, §63.4550, or §63.4560 that applies to your affected source. The notification of compliance status must contain the information specified in paragraphs (c)(1) through (11) of this section and in §63.9(h).

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in §63.4540, §63.4550, or §63.4560 that applies to your affected source.

(4) Identification of the compliance option or options specified in §63.4491 that you used on each coating operation in the affected source during the initial compliance period.

(5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

(6) If you had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of this section.

(i) A description and statement of the cause of the deviation.

(ii) If you failed to meet the applicable emission limit in §63.4490, include all the calculations you used to determine the kg (lb) organic HAP emitted per kg (lb) coating solids used. You do not need to submit information provided by the materials' suppliers or manufacturers,

or test reports.

(7) For each of the data items listed in paragraphs (c)(7)(i) through (iv) of this section that is required by the compliance option(s) you used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data may include a copy of the information provided by the supplier or manufacturer of the example coating or material, or a summary of the results of testing conducted according to §63.4541(a), (b), or (c). You do not need to submit copies of any test reports.

(i) Mass fraction of organic HAP for one coating, for one thinner and/or other additive, and for one cleaning material.

(ii) Mass fraction of coating solids for one coating.

(iii) Density for one coating, one thinner and/or other additive, and one cleaning material, except that if you use the compliant material option, only the example coating density is required.

(iv) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 1 of §63.4551.

(8) The calculation of kg (lb) organic HAP emitted per kg (lb) coating solids used for the compliance option(s) you used, as specified in paragraphs (c)(8)(i) through (iii) of this section.

(i) For the compliant material option, provide an example calculation of the organic HAP content for one coating, using Equation 1 of §63.4541.

(ii) For the emission rate without add-on controls option, provide the calculation of the total mass of organic HAP emissions for each month; the calculation of the total mass of coating solids used each month; and the calculation of the 12-month organic HAP emission rate using Equations 1 and 1A through 1C, 2, and 3, respectively, of §63.4551.

(iii) For the emission rate with add-on controls option, provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month, using Equations 1 and 1A through 1C of §63.4551; the calculation of the total mass of coating solids used each month using Equation 2 of §63.4551; the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.4561 and Equations 2, 3, and 3A through 3C of §63.4561, as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.4561; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.4561.

(9) For the emission rate with add-on controls option, you must include the information specified in paragraphs (c)(9)(i) through (iv) of this section, except that the requirements in paragraphs (c)(9)(i) through (iii) of this section do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j).

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the protocol followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

(ii) A summary of the results of each add-on control device performance test. You do not need to submit complete test reports.

(iii) A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.

(iv) A statement of whether or not you developed and implemented the work practice plan required by §63.4493.

(10) If you are complying with a single emission limit representing the predominant activity under §63.4490(c)(1), include the calculations and supporting information used to demonstrate that this emission limit represents the predominant activity as specified in §63.4490(c)(1).

(11) If you are complying with a facility-specific emission limit under §63.4490(c)(2), include the calculation of the facility-specific emission limit and any supporting information as specified in §63.4490(c)(2).

[69 FR 20990, Apr. 19, 2004, as amended at 69 FR 22661, Apr. 26, 2004]

§ 63.4520 What reports must I submit?

(a) *Semiannual compliance reports.* You must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (7) of this section. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the Clean Air Act (CAA), as specified in paragraph (a)(2) of this section.

(1) *Dates.* Unless the Administrator has approved or agreed to a different schedule for submission of reports under §63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of this section. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in §63.4540, §63.4550, or §63.4560 that applies to your affected source and ends on June 30 or December 31, whichever date is the first date following the end of the initial compliance period.

(ii) Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iii) Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(iv) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of this section.

(2) *Inclusion with title V report.* Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to this section along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all required information concerning deviations from any emission limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(3) *General requirements.* The semiannual compliance report must contain the information specified in paragraphs (a)(3)(i) through (vii) of this section, and the information specified in paragraphs (a)(4) through (7) and (c)(1) of this section that is applicable to your affected source.

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period. The reporting

period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(iv) Identification of the compliance option or options specified in §63.4491 that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning and ending dates for each option you used.

(v) If you used the emission rate without add-on controls or the emission rate with add-on controls compliance option (§63.4491(b) or (c)), the calculation results for each rolling 12-month organic HAP emission rate during the 6-month reporting period.

(vi) If you used the predominant activity alternative (§63.4490(c)(1)), include the annual determination of predominant activity if it was not included in the previous semi-annual compliance report.

(vii) If you used the facility-specific emission limit alternative (§63.4490(c)(2)), include the calculation of the facility-specific emission limit for each 12-month compliance period during the 6-month reporting period.

(4) *No deviations.* If there were no deviations from the emission limitations in §§63.4490, 63.4492, and 63.4493 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. If you used the emission rate with add-on controls option and there were no periods during which the continuous parameter monitoring systems (CPMS) were out-of-control as specified in §63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out-of-control during the reporting period.

(5) *Deviations: Compliant material option.* If you used the compliant material option and there was a deviation from the applicable organic HAP content requirements in §63.4490, the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (iv) of this section.

(i) Identification of each coating used that deviated from the applicable emission limit, and each thinner and/or other additive, and cleaning material used that contained organic HAP, and the dates and time periods each was used.

(ii) The calculation of the organic HAP content (using Equation 1 of §63.4541) for each coating identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (*e.g.,* information provided by coating suppliers or manufacturers, or test reports).

(iii) The determination of mass fraction of organic HAP for each thinner and/or other additive, and cleaning material identified in paragraph (a)(5)(i) of this section. You do not need to submit background data supporting this calculation (*e.g.,* information provided by material suppliers or manufacturers, or test reports).

(iv) A statement of the cause of each deviation.

(6) *Deviations: Emission rate without add-on controls option.* If you used the emission rate without add-on controls option and there was a deviation from the applicable emission limit in §63.4490, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (iii) of this section.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.4490.

(ii) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 1, 1A through 1C, 2, and 3 of §63.4551; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4). You do not need to submit background data supporting these calculations (*e.g.,* information provided by materials suppliers or manufacturers, or test reports).

(iii) A statement of the cause of each deviation.

(7) *Deviations: Emission rate with add-on controls option.* If you used the emission rate with add-on controls option and there was a deviation from an emission limitation (including any periods when emissions bypassed the add-on control device and were diverted to the atmosphere), the semiannual compliance report must contain the information in paragraphs (a)(7)(i) through (xiv) of this section. This includes periods of startup, shutdown, and malfunction during which deviations occurred.

(i) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.4490.

(ii) The calculations used to determine the 12-month organic HAP emission rate for each compliance period in which a deviation occurred. You must provide the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.4551; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4); the calculation of the total mass of coating solids used each month using Equation 2 of §63.4551; the calculation of the mass of organic HAP emission reduction each month by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.4561, and Equations 2, 3, and 3A through 3C of §63.4561, as applicable; the calculation of the total mass of organic HAP emissions each month using Equation 4 of §63.4561; and the calculation of the 12-month organic HAP emission rate using Equation 5 of §63.4561. You do not need to submit the background data supporting these calculations (*e.g.,* information provided by materials suppliers or manufacturers, or test reports).

(iii) The date and time that each malfunction started and stopped.

(iv) A brief description of the CPMS.

(v) The date of the latest CPMS certification or audit.

(vi) The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks.

(vii) The date, time, and duration that each CPMS was out-of-control, including the information in §63.8(c)(8).

(viii) The date and time period of each deviation from an operating limit in Table 1 to this subpart; date and time period of any bypass of the add-on control device; and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(ix) A summary of the total duration of each deviation from an operating limit in Table 1 to this subpart and each bypass of the add-on control device during the semiannual reporting period, and the total duration as a percent of the total source operating time during that semiannual reporting period.

(x) A breakdown of the total duration of the deviations from the operating limits in Table 1 of this subpart and bypasses of the add-on control device during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(xi) A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.

(xii) A description of any changes in the CPMS, coating operation, emission capture system, or add-on control device since the last semiannual reporting period.

(xiii) For each deviation from the work practice standards, a description of the deviation, the date and time period of the deviation, and the actions you took to correct the deviation.

(xiv) A statement of the cause of each deviation.

(b) *Performance test reports.* If you use the emission rate with add-on controls option, you must submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in §63.10(d)(2).

(c) *Startup, shutdown, malfunction reports.* If you used the emission rate with add-on controls option and you had a startup, shutdown, or malfunction during the semiannual reporting period, you must submit the reports specified in paragraphs (c)(1) and (2) of this section.

(1) If your actions were consistent with your startup, shutdown, and malfunction plan, you must include the information specified in §63.10(d) in the semiannual compliance report required by paragraph (a) of this section.

(2) If your actions were not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report as described in paragraphs (c)(2)(i) and (ii) of this section.

(i) You must describe the actions taken during the event in a report delivered by facsimile, telephone, or other means to the Administrator within 2 working days after starting actions that are inconsistent with the plan.

(ii) You must submit a letter to the Administrator within 7 working days after the end of the event, unless you have made alternative arrangements with the Administrator as specified in §63.10(d)(5)(ii). The letter must contain the information specified in §63.10(d)(5)(ii).

§ 63.4530 What records must I keep?

You must collect and keep records of the data and information specified in this section. Failure to collect and keep these records is a deviation from the applicable standard.

(a) A copy of each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report. If you are using the predominant activity alternative under §63.4490(c), you must keep records of the data and calculations used to determine the predominant activity. If you are using the facility-specific emission limit alternative under §63.4490(c), you must keep records of the data used to calculate the facility-specific emission limit for the initial compliance demonstration. You must also keep records of any data used in each annual predominant activity determination and in the calculation of the facility-specific emission limit for each 12-month compliance period included in the semi-annual compliance reports.

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and the mass fraction of coating solids for each coating. If you conducted testing to determine mass fraction of organic HAP, density, or mass fraction of coating solids, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

(c) For each compliance period, the records specified in paragraphs (c)(1) through (4) of this section.

(1) A record of the coating operations on which you used each compliance option and the time periods (beginning and ending dates and times) for each option you used.

(2) For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 1 of §63.4541.

(3) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1, 1A through 1C, and 2 of §63.4551 and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4); the calculation of the total mass of coating solids used each month using Equation 2 of §63.4551; and the calculation of each 12-month organic HAP emission rate using Equation 3 of §63.4551.

(4) For the emission rate with add-on controls option, records of the calculations specified in paragraphs (c)(4)(i) through (v) of this section.

(i) The calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1 and 1A through 1C of §63.4551; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.4551(e)(4);

(ii) The calculation of the total mass of coating solids used each month using Equation 2 of §63.4551;

(iii) The calculation of the mass of organic HAP emission reduction by emission capture systems and add-on control devices using Equations 1 and 1A through 1D of §63.4561 and Equations 2, 3, and 3A through 3C of §63.4561, as applicable;

(iv) The calculation of each month's organic HAP emission rate using Equation 4 of §63.4561; and

(v) The calculation of each 12-month organic HAP emission rate using Equation 5 of §63.4561.

(d) A record of the name and mass of each coating, thinner and/or other additive, and cleaning material used during each compliance period. If you are using the compliant material option for all coatings at the source, you may maintain purchase records for each material used rather than a record of the mass used.

(e) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period.

(f) A record of the mass fraction of coating solids for each coating used during each compliance period.

(g) If you use an allowance in Equation 1 of §63.4551 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to §63.4551(e)(4), you must keep records of the information specified in paragraphs (g)(1) through (3) of this section.

(1) The name and address of each TSDF to which you sent waste materials for which you use an allowance in Equation 1 of §63.4551, a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility; and the date of each shipment.

(2) Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of §63.4551.

(3) The methodology used in accordance with §63.4551(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.

(h) You must keep records of the date, time, and duration of each deviation.

(i) If you use the emission rate with add-on controls option, you must keep the records specified in paragraphs (i)(1) through (8) of this section.

(1) For each deviation, a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) The records required to show continuous compliance with each operating limit specified in Table 1 to this subpart that applies to you.

(4) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in §63.4565(a).

(5) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§63.4564 and 63.4565(b) through (e), including the records specified in paragraphs (i)(5)(i) through (iii) of this section that apply to you.

(i) *Records for a liquid-to-uncaptured gas protocol using a temporary total enclosure or building enclosure.* Records of the mass of total volatile hydrocarbon (TVH) as measured by Method 204A or 204F of appendix M to 40 CFR part 51 for each material used in the coating operation, and the total TVH for all materials used during each capture efficiency test run, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(ii) *Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure.* Records of the mass of TVH emissions captured by the emission capture system as measured by Method 204B or 204C of appendix M to 40 CFR part 51 at the inlet to the add-on control device, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run as measured by Method 204D or 204E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.

(iii) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol as specified in §63.4565(e), if applicable.

(6) The records specified in paragraphs (i)(6)(i) and (ii) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in §63.4566.

(i) Records of each add-on control device performance test conducted according to §§63.4564 and 63.4566.

(ii) Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.

(7) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in §63.4567 and to document compliance with the operating limits as specified in Table 1 to this subpart.

(8) A record of the work practice plan required by §63.4493 and documentation that you are implementing the plan on a continuous basis.

§ 63.4531 In what form and for how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to §63.10(b)(1). You may keep the records off-site for the remaining 3 years.

Compliance Requirements for the Compliant Material Option

§ 63.4540 By what date must I conduct the initial compliance demonstration?

You must complete the initial compliance demonstration for the initial compliance period according to the requirements in §63.4541. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through that month plus the next 12 months. The initial compliance demonstration includes the calculations according to §63.4541 and supporting documentation showing that during the initial compliance period, you used no coating with an organic HAP content that exceeded the applicable emission limit in §63.4490, and that you used no thinners and/or other additives, or cleaning materials that contained organic HAP as determined according to §63.4541(a).

§ 63.4541 How do I demonstrate initial compliance with the emission limitations?

You may use the compliant material option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the emission rate without add-on controls option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the compliant material option, the coating operation or group of coating operations must use no coating with an organic HAP content that exceeds the applicable emission limits in §63.4490 and must use no thinner and/or other additive, or cleaning material that contains organic HAP as determined according to this section. Any coating operation for which you use the compliant material option is not required to meet the operating limits or work practice standards required in §§63.4492 and 63.4493, respectively. You must conduct a separate initial compliance demonstration for each general use coating, TPO coating, automotive lamp coating, and assembled on-road vehicle coating affected source unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. Use the procedures in this section on each coating, thinner and/or other additive, and cleaning material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. You do not need to redetermine the organic HAP content of coatings, thinners and/or other additives, and cleaning materials that are reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the compliant material option, provided these materials in their condition as received were demonstrated to comply with the compliant material option.

(a) *Determine the mass fraction of organic HAP for each material used.* You must determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during the compliance period by using one of the options in paragraphs (a)(1) through (5) of this section.

(1) *Method 311 (appendix A to 40 CFR part 63).* You may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of this section when performing a Method 311 test.

(i) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, you do not have to count it. Express the mass fraction of each organic HAP you count as a value truncated to four places after the decimal point (*e.g.,* 0.3791).

(ii) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (*e.g.,* 0.763).

(2) *Method 24 (appendix A to 40 CFR part 60).* For coatings, you may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may use the alternative method contained in appendix A to this subpart, rather than Method 24. You may use the volatile fraction that is emitted, as measured by

the alternative method in appendix A to this subpart, as a substitute for the mass fraction of organic HAP.

(3) *Alternative method.* You may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(4) *Information from the supplier or manufacturer of the material.* You may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of this section, such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, you do not have to count it. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, you may rely on manufacturer's data that expressly states the organic HAP or volatile matter mass fraction emitted. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of this section, then the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, you may use the default values for the mass fraction of organic HAP in these solvent blends listed in Table 3 or 4 to this subpart. If you use the tables, you must use the values in Table 3 for all solvent blends that match Table 3 entries according to the instructions for Table 3, and you may use Table 4 only if the solvent blends in the materials you use do not match any of the solvent blends in Table 3 and you know only whether the blend is aliphatic or aromatic. However, if the results of a Method 311 (appendix A to 40 CFR part 63) test indicate higher values than those listed on Table 3 or 4 to this subpart, the Method 311 results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(b) *Determine the mass fraction of coating solids for each coating.* You must determine the mass fraction of coating solids (kg (lb) of coating solids per kg (lb) of coating) for each coating used during the compliance period by a test, by information provided by the supplier or the manufacturer of the material, or by calculation, as specified in paragraphs (b)(1) through (3) of this section.

(1) *Method 24 (appendix A to 40 CFR part 60).* Use Method 24 for determining the mass fraction of coating solids. For reactive adhesives in which some of the liquid fraction reacts to form solids, you may use the alternative method contained in appendix A to this subpart, rather than Method 24, to determine the mass fraction of coating solids.

(2) *Alternative method.* You may use an alternative test method for determining the solids content of each coating once the Administrator has approved it. You must follow the procedure in §63.7(f) to submit an alternative test method for approval.

(3) *Information from the supplier or manufacturer of the material.* You may obtain the mass fraction of coating solids for each coating from the supplier or manufacturer. If there is disagreement between such information and the test method results, then the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(c) *Calculate the organic HAP content of each coating.* Calculate the organic HAP content, kg (lb) organic HAP emitted per kg (lb) coating solids used, of each coating used during the compliance period using Equation 1 of this section:

$$H_c = \frac{W_c}{S_c} \qquad (Eq.\ 1)$$

Where:

H_c= Organic HAP content of the coating, kg (lb) of organic HAP emitted per kg (lb) coating solids used.

W_c= Mass fraction of organic HAP in the coating, kg organic HAP per kg coating, determined according to

paragraph (a) of this section.

S_c= Mass fraction of coating solids, kg coating solids per kg coating, determined according to paragraph (b) of this section.

(d) *Compliance demonstration.* The calculated organic HAP content for each coating used during the initial compliance period must be less than or equal to the applicable emission limit in §63.4490; and each thinner and/or other additive, and cleaning material used during the initial compliance period must contain no organic HAP, determined according to paragraph (a) of this section. You must keep all records required by §§63.4530 and 63.4531. As part of the notification of compliance status required in §63.4510, you must identify the coating operation(s) for which you used the compliant material option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.4490, and you used no thinners and/or other additives, or cleaning materials that contained organic HAP, determined according to the procedures in paragraph (a) of this section.

§ 63.4542 How do I demonstrate continuous compliance with the emission limitations?

(a) For each compliance period to demonstrate continuous compliance, you must use no coating for which the organic HAP content (determined using Equation 1 of §63.4541) exceeds the applicable emission limit in §63.4490, and use no thinner and/or other additive, or cleaning material that contains organic HAP, determined according to §63.4541(a). A compliance period consists of 12 months. Each month, after the end of the initial compliance period described in §63.4540, is the end of a compliance period consisting of that month and the preceding 11 months. If you are complying with a facility-specific emission limit under §63.4490(c), you must also perform the calculation using Equation 1 in §63.4490(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If you choose to comply with the emission limitations by using the compliant material option, the use of any coating, thinner and/or other additive, or cleaning material that does not meet the criteria specified in paragraph (a) of this section is a deviation from the emission limitations that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(5).

(c) As part of each semiannual compliance report required by §63.4520, you must identify the coating operation(s) for which you used the compliant material option. If there were no deviations from the applicable emission limit in §63.4490, submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because you used no coatings for which the organic HAP content exceeded the applicable emission limit in §63.4490, and you used no thinner and/or other additive, or cleaning material that contained organic HAP, determined according to §63.4541(a).

(d) You must maintain records as specified in §§63.4530 and 63.4531.

Compliance Requirements for the Emission Rate Without Add-On Controls Option

§ 63.4550 By what date must I conduct the initial compliance demonstration?

You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.4551. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and mass of coating solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the calculations according to §63.4551 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.4490.

§ 63.4551 How do I demonstrate initial compliance with the emission limitations?

You may use the emission rate without add-on controls option for any individual coating operation, for any group of coating operations in the affected source, or for all the coating operations in the affected source. You must use either the compliant material option or the emission rate with add-on controls option for any coating operation in the affected source for which you do not use this option. To demonstrate initial compliance using the emission rate without add-on controls option, the coating operation or group of coating operations must meet the applicable emission limit in §63.4490, but is not required to meet the operating limits or work practice standards in §§63.4492 and 63.4493, respectively. You must conduct a separate initial compliance demonstration for each general use, TPO, automotive lamp, and assembled on-road vehicle coating operation unless you are demonstrating compliance with a

predominant activity or facility-specific emission limit as provided in §63.4490(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate with add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coating operation for which you use the emission rate without add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(a) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each month according to the requirements in §63.4541(a).

(b) *Determine the mass fraction of coating solids.* Determine the mass fraction of coating solids (kg (lb) of coating solids per kg (lb) of coating) for each coating used during each month according to the requirements in §63.4541(b).

(c) *Determine the density of each material.* Determine the density of each liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475–98, “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see §63.14), information from the supplier or manufacturer of the material, or reference sources providing density or specific gravity data for pure materials. If there is disagreement between ASTM Method D1475–98 and other such information sources, the test results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine material density. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

(d) *Determine the volume of each material used.* Determine the volume (liters) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If you purchase materials or monitor consumption by weight instead of volume,
you do not need to determine the volume of each material used. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2 of this section.

(e) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners and/or other additives, and cleaning materials used during each month minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using Equation 1 of this section.

$$H_e = A + B + C - R_w \qquad (Eq.\ 1)$$

Where:

H_e= Total mass of organic HAP emissions during the month, kg.

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of this section.

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg, as calculated in Equation 1B of this section.

C = Total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C of this section.

R_w= Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, kg, determined according to paragraph (e)(4) of this section. (You may assign a value of zero to $R_W$if you do not wish to use this allowance.)

(1) Calculate the kg organic HAP in the coatings used during the month using Equation 1A of this

section:

$$A = \sum_{i=1}^{m} \left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad (Eq.\ 1A)$$

Where:

A = Total mass of organic HAP in the coatings used during the month, kg.

Volc,i= Total volume of coating, i, used during the month, liters.

Dc,i= Density of coating, i, kg coating per liter coating.

Wc,i= Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

m = Number of different coatings used during the month.

(2) Calculate the kg of organic HAP in the thinners and/or other additives used during the month using Equation 1B of this section:

$$B = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \qquad (Eq.\ 1B)$$

Where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

n = Number of different thinners and/or other additives used during the month.

(3) Calculate the kg organic HAP in the cleaning materials used during the month using Equation 1C of this section:

$$C = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \qquad (Eq.\ 1C)$$

Where:

C = Total mass of organic HAP in the cleaning materials used during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg material.

p = Number of different cleaning materials used during the month.

(4) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 1 of this section, then you must determine the mass according to paragraphs (e)(4)(i) through (iv) of this section.

(i) You may only include waste materials in the determination that are generated by coating

operations in the affected source for which you use Equation 1 of this section and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. You may not include organic HAP contained in wastewater.

(ii) You must determine either the amount of the waste materials sent to a TSDF during the month or the amount collected and stored during the month and designated for future transport to a TSDF. Do not include in your determination any waste materials sent to a TSDF during a month if you have already included them in the amount collected and stored during that month or a previous month.

(iii) Determine the total mass of organic HAP contained in the waste materials specified in paragraph (e)(4)(ii) of this section.

(iv) You must document the methodology you use to determine the amount of waste materials and the total mass of organic HAP they contain, as required in §63.4530(g). If waste manifests include this information, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(f) *Calculate the total mass of coating solids used.* Determine the total mass of coating solids used, kg, which is the combined mass of coating solids for all the coatings used during each month, using Equation 2 of this section:

$$M_{st} = \sum_{i=1}^{m} \left(\mathrm{Vol}_{c,i}\right)\left(\mathrm{D}_{c,i}\right)\left(\mathrm{M}_{s,i}\right) \qquad (Eq.\ 2)$$

Where:

M_{st}= Total mass of coating solids used during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kgs per liter coating, determined according to §63.4551(c).

$M_{s,i}$= Mass fraction of coating solids for coating, i, kgs solids per kg coating, determined according to §63.4541(b).

m = Number of coatings used during the month.

(g) *Calculate the organic HAP emission rate.* Calculate the organic HAP emission rate for the compliance period, kg (lb) organic HAP emitted per kg (lb) coating solids used, using Equation 3 of this section:

$$H_{yr} = \frac{\sum_{y=1}^{n} H_e}{\sum_{y=1}^{n} M_{st}} \qquad (Eq.\ 3)$$

Where:

H_{yr}= Average organic HAP emission rate for the compliance period, kg organic HAP emitted per kg coating solids used.

H_e= Total mass of organic HAP emissions from all materials used during month, y, kg, as calculated by Equation 1 of this section.

M_{st}= Total mass of coating solids used during month, y, kg, as calculated by Equation 2 of this section.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(h) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period calculated using Equation 3 of this section must be less than or equal to the applicable emission limit for each subcategory in §63.4490 or the predominant activity or facility-specific emission limit allowed in §63.4490(c). You must keep all records as required by §§63.4530 and 63.4531. As part of the notification of compliance status required by §63.4510, you must identify the coating operation(s) for which you used the emission rate without add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.4490, determined according to the procedures in this section.

§ 63.4552 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period, determined according to §63.4551(a) through (g), must be less than or equal to the applicable emission limit in §63.4490. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.4550 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.4551(a) through (g) on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.4490(c), you must also perform the calculation using Equation 1 in §63.4490(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit in §63.4490, this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(6).

(c) As part of each semiannual compliance report required by §63.4520, you must identify the coating operation(s) for which you used the emission rate without add-on controls option. If there were no deviations from the emission limitations, you must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.4490, determined according to §63.4551(a) through (g).

(d) You must maintain records as specified in §§63.4530 and 63.4531.

Compliance Requirements for the Emission Rate With Add-On Controls Option

§ 63.4560 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) *New and reconstructed affected sources.* For a new or reconstructed affected source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.4483. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j), you must conduct a performance test of each capture system and add-on control device according to §§63.4564, 63.4565, and 63.4566 and establish the operating limits required by §63.4492 no later than 180 days after the applicable compliance date specified in §63.4483. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.4561(j), you must initiate the first material balance no later than the applicable compliance date specified in §63.4483.

(2) You must develop and begin implementing the work practice plan required by §63.4493 no later than the compliance date specified in §63.4483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.4561. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and mass of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.4564, 63.4565, and 63.4566; results of liquid-liquid material balances conducted according to §63.4561(j); calculations according to §63.4561 and supporting documentation showing that during the initial compliance period the

organic HAP emission rate was equal to or less than the applicable emission limit in §63.4490; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.4568; and documentation of whether you developed and implemented the work practice plan required by §63.4493.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.4492 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section. The requirements in this paragraph (a)(4) do not apply to solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements in §63.4561(j).

(b) *Existing affected sources.* For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.4483. Except for solvent recovery systems for which you conduct liquid-liquid material balances according to §63.4561(j), you must conduct a performance test of each capture system and add-on control device according to the procedures in §§63.4564, 63.4565, and 63.4566 and establish the operating limits required by §63.4492 no later than the compliance date specified in §63.4483. For a solvent recovery system for which you conduct liquid-liquid material balances according to §63.4561(j), you must initiate the first material balance no later than the compliance date specified in §63.4483.

(2) You must develop and begin implementing the work practice plan required by §63.4493 no later than the compliance date specified in §63.4483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.4561. The initial compliance period begins on the applicable compliance date specified in §63.4483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. You must determine the mass of organic HAP emissions and mass of coatings solids used each month and then calculate an organic HAP emission rate at the end of the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.4564, 63.4565, and 63.4566; results of liquid-liquid material balances conducted according to §63.4561(j); calculations according to §63.4561 and supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the applicable emission limit in §63.4490; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.4568; and documentation of whether you developed and implemented the work practice plan required by §63.4493.

(c) You are not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if you receive approval to use the results of a performance test that has been previously conducted on that capture system or control device. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of this section.

(1) The previous test must have been conducted using the methods and conditions specified in this subpart.

(2) Either no process or equipment changes must have been made since the previous test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(3) Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.

§ 63.4561 How do I demonstrate initial compliance?

(a) You may use the emission rate with add-on controls option for any coating operation, for any group of coating operations in the affected source, or for all of the coating operations in the affected source. You may

include both controlled and uncontrolled coating operations in a group for which you use this option. You must use either the compliant material option or the emission rate without add-on controls option for any coating operation in the affected source for which you do not use the emission rate with add-on controls option. To demonstrate initial compliance, the coating operation(s) for which you use the emission rate with add-on controls option must meet the applicable emission limitations in §§63.4490, 63.4492, and 63.4493. You must conduct a separate initial compliance demonstration for each general use, TPO, automotive lamp, and assembled on-road vehicle coating operation, unless you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c). If you are demonstrating compliance with a predominant activity or facility-specific emission limit as provided in §63.4490(c), you must demonstrate that all coating operations included in the predominant activity determination or calculation of the facility-specific emission limit comply with that limit. You must meet all the requirements of this section. When calculating the organic HAP emission rate according to this section, do not include any coatings, thinners and/or other additives, or cleaning materials used on coating operations for which you use the compliant material option or the emission rate without add-on controls option. You do not need to redetermine the mass of organic HAP in coatings, thinners and/or other additives, or cleaning materials that have been reclaimed onsite (or reclaimed off-site if you have documentation showing that you received back the exact same materials that were sent off-site) and reused in the coatings operation(s) for which you use the emission rate with add-on controls option. If you use coatings, thinners and/or other additives, or cleaning materials that have been reclaimed on-site, the amount of each used in a month may be reduced by the amount of each that is reclaimed. That is, the amount used may be calculated as the amount consumed to account for materials that are reclaimed.

(b) *Compliance with operating limits.* Except as provided in §63.4560(a)(4), and except for solvent recovery systems for which you conduct liquid-liquid material balances according to the requirements of paragraph (j) of this section, you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.4492, using the procedures specified in §§63.4567 and 63.4568.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plan required by §63.4493 during the initial compliance period, as specified in §63.4530.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (e) through (n) of this section to demonstrate compliance with the applicable emission limit in §63.4490 for each affected source in each subcategory.

(e) *Determine the mass fraction of organic HAP, density, volume used, and mass fraction of coating solids.* Follow the procedures specified in §63.4551(a) through (d) to determine the mass fraction of organic HAP, density, and volume of each coating, thinner and/or other additive, and cleaning material used during each month; and the mass fraction of coating solids for each coating used during each month.

(f) *Calculate the total mass of organic HAP emissions before add-on controls.* Using Equation 1 of §63.4551, calculate the total mass of organic HAP emissions before add-on controls from all coatings, thinners and/or other additives, and cleaning materials used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option.

(g) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions that pass through the emission capture system and are destroyed or removed by the add-on control device. Use the procedures in paragraph (h) of this section to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which you conduct a liquid-liquid material balance, use the procedures in paragraph (j) of this section to calculate the organic HAP emission reduction.

(h) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balance.* Use Equation 1 of this section to calculate the organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which you conduct liquid-liquid material balances. The calculation applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation served by the emission capture system and add-on control device during each month. You must assume zero efficiency for the emission capture system and add-on control device for any period of time a deviation specified in §63.4563(c) or (d) occurs in the controlled coating operation, including a deviation during a period of startup, shutdown, or malfunction, unless you have other data indicating the actual

efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator. Equation 1 of this section treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation.

$$H_C = \left(A_C + B_C + C_C - R_W - H_{UNC}\right)\left(\frac{CE}{100} \times \frac{DRE}{100}\right) \qquad (Eq.\ 1)$$

Where:

H_C= Mass of organic HAP emission reduction for the controlled coating operation during the month, kg.

A_C= Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 1A of this section.

B_C= Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg, as calculated in Equation 1B of this section.

C_C= Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg, as calculated in Equation 1C of this section.

R_w= Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to §63.4951(e)(4). (You may assign a value of zero to $R_w$if you do not wish to use this allowance.)

H_{UNC}= Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.4563(c) and (d) that occurred during the month in the controlled coating operation, kg, as calculated in Equation 1D of this section.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in §§63.4564 and 63.4565 to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in §§63.4564 and 63.4566 to measure and record the organic HAP destruction or removal efficiency.

(1) Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg (lb), using Equation 1A of this section:

$$A_C = \sum_{i=1}^{m}\left(Vol_{c,i}\right)\left(\mathrm{D}_{c,i}\right)\left(\mathrm{W}_{c,i}\right) \quad (Eq.\ 1\mathrm{A})$$

Where:

A_C= Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month, liters.

$D_{c,i}$= Density of coating, i, kg per liter.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg per kg. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

m = Number of different coatings used.

(2) Calculate the mass of organic HAP in the thinners and/or other additives used in the controlled coating operation, kg (lb), using Equation 1B of this section:

$$B_C = \sum_{j=1}^{n}\left(Vol_{t,j}\right)\left(\mathrm{D}_{t,j}\right)\left(\mathrm{W}_{t,j}\right) \qquad (Eq.\ 1\mathrm{B})$$

Where:

B_C= Total mass of organic HAP in the thinners and/or other additives used in the controlled coating operation during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg per kg. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

n = Number of different thinners and/or other additives used.

(3) Calculate the mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg (lb), using Equation 1C of this section:

$$C_C = \sum_{k=1}^{p} (Vol_{s,k})(D_{s,k})(W_{s,k}) \quad (Eq.\ 1C)$$

Where:

C_C= Total mass of organic HAP in the cleaning materials used in the controlled coating operation during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg per kg.

p = Number of different cleaning materials used.

(4) Calculate the mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used in the controlled coating operation during deviations specified in §63.4563(c) and (d), using Equation 1D of this section:

$$H_{UNC} = \sum_{h=1}^{q} (Vol_h)(D_h)(W_h) \quad (Eq.\ 1D)$$

Where:

H_{UNC}= Total mass of organic HAP in the coatings, thinners and/or other additives, and cleaning materials used during all deviations specified in §63.4563(c) and (d) that occurred during the month in the controlled coating operation, kg.

Vol_h= Total volume of coating, thinner and/or other additive, or cleaning material, h, used in the controlled coating operation during deviations, liters.

D_h= Density of coating, thinner and/or other additives, or cleaning material, h, kg per liter.

W_h= Mass fraction of organic HAP in coating, thinner and/or other additives, or cleaning material, h, kg organic HAP per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

q = Number of different coatings, thinners and/or other additives, and cleaning materials used.

(i) [Reserved]

(j) *Calculate the organic HAP emission reduction for each controlled coating operation using liquid-liquid material balances.* For each controlled coating operation using a solvent recovery system for which you conduct liquid-liquid material balances, calculate the organic HAP emission reduction by applying the volatile

organic matter collection and recovery efficiency to the mass of organic HAP contained in the coatings, thinners and/or other additives, and cleaning materials that are used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in paragraphs (j)(1) through (6) of this section. Calculate the mass of organic HAP emission reduction by the solvent recovery system as specified in paragraph (j)(7) of this section.

(1) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device must be initially certified by the manufacturer to be accurate to within ±2.0 percent of the mass of volatile organic matter recovered.

(2) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month, based on measurement with the device required in paragraph (j)(1) of this section.

(3) Determine the mass fraction of volatile organic matter for each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg volatile organic matter per kg coating. You may determine the volatile organic matter mass fraction using Method 24 of 40 CFR part 60, appendix A, or an EPA approved alternative method, or you may use information provided by the manufacturer or supplier of the coating. In the event of any inconsistency between information provided by the manufacturer or supplier and the results of Method 24 of 40 CFR part 60, appendix A, or an approved alternative method, the test method results will take precedence unless, after consultation you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(4) Determine the density of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, kg per liter, according to §63.4551(c).

(5) Measure the volume of each coating, thinner and/or other additive, and cleaning material used in the coating operation controlled by the solvent recovery system during the month, liters.

(6) Each month, calculate the solvent recovery system's volatile organic matter collection and recovery efficiency, using Equation 2 of this section:

$$R_V = 100 \frac{M_{VR}}{\sum_{i=1}^{m} Vol_i D_i WV_{c,i} + \sum_{j=1}^{n} Vol_j D_j WV_{t,j} + \sum_{k=1}^{p} Vol_k D_k WV_{s,k}} \qquad (Eq.\ 2)$$

Where:

R_V= Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

M_{VR}= Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

Vol_i= Volume of coating, i, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_i= Density of coating, i, kg per liter.

$WV_{c,i}$= Mass fraction of volatile organic matter for coating, i, kg volatile organic matter per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

Vol_j= Volume of thinner and/or other additive, j, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_j= Density of thinner and/or other additive, j, kg per liter.

$WV_{t,j}$= Mass fraction of volatile organic matter for thinner and/or other additive, j, kg volatile organic matter per kg thinner and/or other additive. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

Vol_k= Volume of cleaning material, k, used in the coating operation controlled by the solvent recovery system during the month, liters.

D_k= Density of cleaning material, k, kg per liter.

$WV_{s,k}$= Mass fraction of volatile organic matter for cleaning material, k, kg volatile organic matter per kg cleaning material.

m = Number of different coatings used in the coating operation controlled by the solvent recovery system during the month.

n = Number of different thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month.

p = Number of different cleaning materials used in the coating operation controlled by the solvent recovery system during the month.

(7) Calculate the mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system during the month, using Equation 3 of this section and according to paragraphs (j)(7)(i) through (iii) of this section:

$$H_{CSR} = \left(A_{CSR} + B_{CSR} + C_{CSR}\right)\left(\frac{R_v}{100}\right) \qquad (Eq.\ 3)$$

Where:

H_{CSR}= Mass of organic HAP emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance during the month, kg.

A_{CSR}= Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3A of this section.

B_{CSR}= Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3B of this section.

C_{CSR}= Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system, kg, calculated using Equation 3C of this section.

R_V= Volatile organic matter collection and recovery efficiency of the solvent recovery system, percent, from Equation 2 of this section.

(i) Calculate the mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system, kg, using Equation 3A of this section.

$$A_{CSR} = \sum_{i=1}^{m}\left(Vol_{c,i}\right)\left(D_{c,i}\right)\left(W_{c,i}\right) \qquad (Eq.\ 3A)$$

Where:

A_{CSR}= Total mass of organic HAP in the coatings used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{c,i}$= Total volume of coating, i, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{c,i}$= Density of coating, i, kg per liter.

$W_{c,i}$= Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

m = Number of different coatings used.

(ii) Calculate the mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system, kg, using Equation 3B of this section:

$$B_{CSR} = \sum_{j=1}^{n} \left(Vol_{t,j}\right)\left(D_{t,j}\right)\left(W_{t,j}\right) \quad (Eq.\ 3B)$$

Where:

B_{CSR}= Total mass of organic HAP in the thinners and/or other additives used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{t,j}$= Total volume of thinner and/or other additive, j, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{t,j}$= Density of thinner and/or other additive, j, kg per liter.

$W_{t,j}$= Mass fraction of organic HAP in thinner and/or other additive, j, kg organic HAP per kg thinner and/or other additive. For reactive adhesives as defined in §63.4581, use the mass fraction of organic HAP that is emitted as determined using the method in appendix A to this subpart.

n = Number of different thinners and/or other additives used.

(iii) Calculate the mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg, using Equation 3C of this section:

$$C_{CSR} = \sum_{k=1}^{p} \left(Vol_{s,k}\right)\left(D_{s,k}\right)\left(W_{s,k}\right) \quad (Eq.\ 3C)$$

Where:

C_{CSR}= Total mass of organic HAP in the cleaning materials used in the coating operation controlled by the solvent recovery system during the month, kg.

$Vol_{s,k}$= Total volume of cleaning material, k, used during the month in the coating operation controlled by the solvent recovery system, liters.

$D_{s,k}$= Density of cleaning material, k, kg per liter.

$W_{s,k}$= Mass fraction of organic HAP in cleaning material, k, kg organic HAP per kg cleaning material.

p = Number of different cleaning materials used.

(k) *Calculate the total mass of coating solids used.* Determine the total mass of coating solids used, kg, which is the combined mass of coating solids for all the coatings used during each month in the coating operation or group of coating operations for which you use the emission rate with add-on controls option, using Equation 2 of §63.4551.

(l) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions, kg, during each month, using Equation 4 of this section:

$$H_{HAP} = H_e - \sum_{i=1}^{q} \left(H_{C,i}\right) - \sum_{j=1}^{r} \left(H_{CSR,j}\right) \qquad (Eq.\ 4)$$

Where:

H_{HAP}= Total mass of organic HAP emissions for the month, kg.

H_e= Total mass of organic HAP emissions before add-on controls from all the coatings, thinners and/or other additives, and cleaning materials used during the month, kg, determined according to paragraph (f) of this section.

$H_{C,i}$= Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, during the month, kg, from Equation 1 of this section.

$H_{CSR,j}$= Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 3 of this section.

q = Number of controlled coating operations not controlled by a solvent recovery system using a liquid-liquid material balance.

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

(m) *Calculate the organic HAP emission rate for the compliance period.* Determine the organic HAP emission rate for the compliance period, kg (lb) of organic HAP emitted per kg (lb) coating solids used, using Equation 5 of this section:

$$H_{annual} = \frac{\sum_{y=1}^{n} H_{HAP,y}}{\sum_{y=1}^{n} M_{st,y}} \qquad (Eq.\ 5)$$

Where:

H_{annual}= Organic HAP emission rate for the compliance period, kg organic HAP emitted per kg coating solids used.

$H_{HAP,y}$= Organic HAP emissions for month, y, kg, determined according to Equation 4 of this section.

$M_{st,y}$= Total mass of coating solids used during month, y, kg, from Equation 2 of §63.4551.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for the initial compliance period, n equals 12 if the compliance date falls on the first day of a month; otherwise n equals 13; for all following compliance periods, n equals 12).

(n) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period, calculated using Equation 5 of this section, must be less than or equal to the applicable emission limit for each subcategory in §63.4490 or the predominant activity or facility-specific emission limit allowed in §63.4490(c). You must keep all records as required by §§63.4530 and 63.4531. As part of the notification of compliance status required by §63.4510, you must identify the coating operation(s) for which you used the emission rate with add-on controls option and submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in §63.4490, and you achieved the operating limits required by §63.4492 and the work practice standards required by §63.4493.

§ 63.4562 [Reserved]

§ 63.4563 How do I demonstrate continuous compliance with the emission limitations?

(a) To demonstrate continuous compliance with the applicable emission limit in §63.4490, the organic HAP emission rate for each compliance period, determined according to the procedures in §63.4561, must be equal to or less than the applicable emission limit in §63.4490. A compliance period consists of 12 months. Each month after the end of the initial compliance period described in §63.4560 is the end of a compliance period consisting of that month and the preceding 11 months. You must perform the calculations in §63.4561 on a monthly basis using data from the previous 12 months of operation. If you are complying with a facility-specific emission limit under §63.4490(c), you must also perform the calculation using Equation 1 in §63.4490(c)(2) on a monthly basis using the data from the previous 12 months of operation.

(b) If the organic HAP emission rate for any 12-month compliance period exceeded the applicable emission limit

in §63.4490, this is a deviation from the emission limitation for that compliance period that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7).

(c) You must demonstrate continuous compliance with each operating limit required by §63.4492 that applies to you, as specified in Table 1 to this subpart, when the coating line is in operation.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation, unless you have other data indicating the actual efficiency of the emission capture system and add-on control device and the use of these data is approved by the Administrator.

(d) You must meet the requirements for bypass lines in §63.4568(b) for controlled coating operations for which you do not conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7). For the purposes of completing the compliance calculations specified in §§63.4561(h), you must treat the materials used during a deviation on a controlled coating operation as if they were used on an uncontrolled coating operation for the time period of the deviation as indicated in Equation 1 of §63.4561.

(e) You must demonstrate continuous compliance with the work practice standards in §63.4493. If you did not develop a work practice plan, or you did not implement the plan, or you did not keep the records required by §63.4530(i)(8), this is a deviation from the work practice standards that must be reported as specified in §§63.4510(c)(6) and 63.4520(a)(7).

(f) As part of each semiannual compliance report required in §63.4520, you must identify the coating operation(s) for which you used the emission rate with add-on controls option. If there were no deviations from the emission limitations, submit a statement that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.4490, and you achieved the operating limits required by §63.4492 and the work practice standards required by §63.4493 during each compliance period.

(g)–(i) [Reserved]

(j) You must maintain records as specified in §§63.4530 and 63.4531.

[69 FR 20990, Apr. 19, 2004, as amended at 71 FR 20465, Apr. 20, 2006]

§ 63.4564 What are the general requirements for performance tests?

(a) You must conduct each performance test required by §63.4560 according to the requirements in §63.7(e)(1) and under the conditions in this section, unless you obtain a waiver of the performance test according to the provisions in §63.7(h).

(1) *Representative coating operation operating conditions.* You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, or malfunction and during periods of nonoperation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

(2) *Representative emission capture system and add-on control device operating conditions.* You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(b) You must conduct each performance test of an emission capture system according to the requirements in §63.4565. You must conduct each performance test of an add-on control device according to the requirements in §63.4566.

§ 63.4565 How do I determine the emission capture system efficiency?

You must use the procedures and test methods in this section to determine capture efficiency as part of the performance test required by §63.4560.

(a) *Assuming 100 percent capture efficiency.* You may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of this section are met:

(1) The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.

(2) All coatings, thinners and/or other additives, and cleaning materials used in the coating operation are applied within the capture system; coating solvent flash-off, curing, and drying occurs within the capture system; and the removal or evaporation of cleaning materials from the surfaces they are applied to occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.

(b) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of this section, then you must use one of the three protocols described in paragraphs (c), (d), and (e) of this section to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of this section, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of the production, which includes surface preparation activities and drying and curing time.

(c) *Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (c)(1) through (6) of this section to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204A or 204F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating, thinner and/or other additive, and cleaning material used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term volatile organic compounds (VOC) in the methods.

(3) Use Equation 1 of this section to calculate the total mass of TVH liquid input from all the coatings, thinners and/or other additives, and cleaning materials used in the coating operation during each capture efficiency test run:

$$TVH_{used} = \sum_{i=1}^{n} (TVH_i)(Vol_i)(D_i) \quad (Eq.\ 1)$$

Where:

TVH_{used}= Mass of liquid TVH in materials used in the coating operation during the capture efficiency test run, kg.

TVH_i= Mass fraction of TVH in coating, thinner and/or other additive, or cleaning material, i, that is used in the coating operation during the capture efficiency test run, kg TVH per kg material.

Vol_i= Total volume of coating, thinner and/or other additive, or cleaning material, i, used in the coating operation during the capture efficiency test run, liters.

D_i= Density of coating, thinner and/or other additive, or cleaning material, i, kg material per liter material.

n = Number of different coatings, thinners and/or other additives, and cleaning materials used in the coating operation during the capture efficiency test run.

(4) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system. They are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(5) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of this section:

$$CE = \frac{\left(TVH_{used} - TVH_{uncaptured}\right)}{TVH_{used}} \times 100 \qquad (Eq.\ 2)$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

TVH_{used}= Total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

$TVH_{uncaptured}$= Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(6) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(d) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of this section to measure emission capture system efficiency using the gas-to-gas protocol.

(1) Either use a building enclosure or construct an enclosure around the coating operation where coatings, thinners and/or other additives, and cleaning materials are applied, and all areas where emissions from these applied coatings and materials subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

(2) Use Method 204B or 204C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) The sampling points for the Method 204B or 204C measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.

(ii) If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously measured in each duct and the total emissions entering the add-on

control device must be determined.

(3) Use Method 204D or 204E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.

(i) Use Method 204D of appendix M to 40 CFR part 51 if the enclosure is a temporary total enclosure.

(ii) Use Method 204E of appendix M to 40 CFR part 51 if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

(4) For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of this section:

$$CE = \frac{TVH_{captured}}{\left(TVH_{captured} + TVH_{uncaptured}\right)} \times 100 \qquad (Eq.\ 3)$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

$TVH_{captured}$= Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

$TVH_{uncaptured}$= Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

(5) Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

(e) *Alternative capture efficiency protocol.* As an alternative to the procedures specified in paragraphs (c) and (d) of this section and subject to the approval of the Administrator, you may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of this part.

§ 63.4566 How do I determine the add-on control device emission destruction or removal efficiency?

You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by §63.4560. You must conduct three test runs as specified in §63.7(e)(3) and each test run must last at least 1 hour.

(a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight.

(4) Use Method 4 of appendix A to 40 CFR part 60, to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either Method 25 or 25A of appendix A to 40 CFR part 60.

(1) Use Method 25 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million (ppm) at the control device outlet.

(2) Use Method 25A if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppm or less at the control device outlet.

(3) Use Method 25A if the add-on control device is not an oxidizer.

(c) If two or more add-on control devices are used for the same emission stream, then you must measure emissions at the outlet to the atmosphere of each device. For example, if one add-on control device is a concentrator with an outlet to the atmosphere for the high-volume dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet to the atmosphere for the low-volume concentrated stream that is treated with the oxidizer, you must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator.

(d) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 of this section. If there is more than one inlet or outlet to the add-on control device, you must calculate the total gaseous organic mass flow rate using Equation 1 of this section for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions:

$$M_f = Q_{sd} C_c (12)(0.0416)(10^{-6}) \quad (Eq.\ 1)$$

Where:

M_f= Total gaseous organic emissions mass flow rate, kg/per hour (h).

C_c= Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, parts per million by volume (ppmv), dry basis.

Q_{sd}= Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters/hour (dscm/h).

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(e) For each test run, determine the add-on control device organic emissions destruction or removal efficiency, using Equation 2 of this section:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \qquad (Eq.\ 2)$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi}= Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of this section, kg/h.

M_{fo}= Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of this section, kg/h.

(f) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

§ 63.4567 How do I establish the emission capture system and add-on control device operating limits during the performance test?

During the performance test required by §63.4560 and described in §§63.4564, 63.4565, and 63.4566, you must establish the operating limits required by §63.4492 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.4492.

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (a)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(b) *Catalytic oxidizers.* If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (b)(1) and (2) or paragraphs (b)(3) and (4) of this section.

(1) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(3) You must monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (b)(4) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(4) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (b)(3) of this section. The plan must address, at a minimum, the elements specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) Annual sampling and analysis of the catalyst activity (*i.e.,* conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

(ii) Monthly external inspection of the catalytic oxidizer system, including the burner assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

(iii) Annual internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst then you must conduct a new performance test to determine destruction efficiency according to §63.4566. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and you may continue to use the previously established operating limits for that catalytic oxidizer.

(c) *Regenerative carbon adsorbers.* If your add-on control device is a regenerative carbon adsorber, establish the operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each regeneration cycle, and the carbon bed temperature after each carbon bed regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your regenerative carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature

recorded after the cooling cycle.

(d) *Condensers.* If your add-on control device is a condenser, establish the operating limits according to paragraphs (d)(1) and (2) of this section.

(1) During the performance test, you must monitor and record the condenser outlet (product side) gas temperature at least once every 15 minutes during each of the three test runs.

(2) Use the data collected during the performance test to calculate and record the average condenser outlet (product side) gas temperature maintained during the performance test. This average condenser outlet gas temperature is the maximum operating limit for your condenser.

(e) *Concentrators.* If your add-on control device includes a concentrator, you must establish operating limits for the concentrator according to paragraphs (e)(1) through (4) of this section.

(1) During the performance test, you must monitor and record the desorption concentrate stream gas temperature at least once every 15 minutes during each of the three runs of the performance test.

(2) Use the data collected during the performance test to calculate and record the average temperature. This is the minimum operating limit for the desorption concentrate gas stream temperature.

(3) During the performance test, you must monitor and record the pressure drop of the dilute stream across the concentrator at least once every 15 minutes during each of the three runs of the performance test.

(4) Use the data collected during the performance test to calculate and record the average pressure drop. This is the minimum operating limit for the dilute stream across the concentrator.

(f) *Emission capture systems.* For each capture device that is not part of a PTE that meets the criteria of §63.4565(a), establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of this section. The operating limit for a PTE is specified in Table 1 to this subpart.

(1) During the capture efficiency determination required by §63.4560 and described in §§63.4564 and 63.4565, you must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in your emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.

(2) Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

§ 63.4568 What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

(a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device

parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations is a deviation from the monitoring requirements.

(b) *Capture system bypass line.* You must meet the requirements of paragraphs (b)(1) and (2) of this section for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere.

(1) You must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in paragraphs (b)(1)(i) through (v) of this section.

(i) *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

(ii) *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. You must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.

(iii) *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. You must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

(iv) *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is *stopped* when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. You must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.

(v) *Flow direction indicator.* Install, calibrate, maintain, and operate according to the manufacturer's *specifications* a flow direction indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. Each time the flow direction changes, the next reading of the time of occurrence and flow direction must be recorded. The flow direction indicator must be installed in each bypass line or air makeup supply line that could divert the emissions away from the add-on control device to the atmosphere.

(2) If any bypass line is opened, you must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in §63.4520.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used with concentrators or with carbon adsorbers to treat desorbed

concentrate streams), you must comply with the requirements in paragraphs (c)(1) through (3) of this section:

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install gas temperature monitors upstream and/or downstream of the catalyst bed as required in §63.3967(b).

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (v) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a measurement sensitivity of 5 degrees Fahrenheit or 1.0 percent of the temperature value, whichever is larger.

(iii) Before using the sensor for the first time or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.

(iv) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor output to redundant temperature sensors, to calibrated temperature measurement devices, or to temperature simulation devices.

(v) Conduct a visual inspection of each sensor every quarter if redundant temperature sensors are not used.

(d) *Regenerative carbon adsorbers.* If you are using a regenerative carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) through (3) of this section.

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(3) For all regenerative carbon adsorbers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(e) *Condensers.* If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The temperature monitor must provide a gas temperature record at least once every 15 minutes.

(2) For all condensers, you must meet the requirements in paragraphs (c)(3)(i) through (v) of this section for each temperature monitoring device.

(f) *Concentrators.* If you are using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) and (2) of this section.

(1) You must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must install a device to monitor pressure drop across the zeolite wheel or rotary carbon bed. The pressure monitoring device must meet the requirements in paragraphs (a) and (g)(2) of this section.

(g) *Emission capture systems.* The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of this section.

(1) For each flow measurement device, you must meet the requirements in paragraphs (a) and (g)(1)(i) through (vii) of this section.

(i) Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

(ii) Use a flow sensor with an accuracy of at least 10 percent of the flow.

(iii) Perform an initial sensor calibration in accordance with the manufacturer's requirements.

(iv) Perform a validation check before initial use or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values with electronic signal simulations or via relative accuracy testing.

(v) Conduct an accuracy audit every quarter and after every deviation. Accuracy audit methods include comparisons of sensor values with electronic signal simulations or via relative accuracy testing.

(vi) Perform leak checks monthly.

(vii) Perform visual inspections of the sensor system quarterly if there is no redundant sensor.

(2) For each pressure drop measurement device, you must comply with the requirements in paragraphs (a) and (g)(2)(i) through (vii) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening you are monitoring.

(ii) Use a pressure sensor with an accuracy of at least 0.5 inches of water column or 5 percent of the measured value, whichever is larger.

(iii) Perform an initial calibration of the sensor according to the manufacturer's requirements.

(iv) Conduct a validation check before initial operation or upon relocation or replacement of a sensor. Validation checks include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(v) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of sensor values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources.

(vi) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds.

(vii) Perform a visual inspection of the sensor at least monthly if there is no redundant sensor.

Other Requirements and Information

§ 63.4580 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section:

(1) Approval of alternatives to the requirements in §§63.4481 through 4483 and §§63.4490 through 4493.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§ 63.4581 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in 40 CFR 63.2, and in this section as follows:

Additive means a material that is added to a coating after purchase from a supplier (e.g., catalysts, activators, accelerators).

Add-on control means an air pollution control device, such as a thermal oxidizer or carbon adsorber, that reduces pollution in an air stream by destruction or removal before discharge to the atmosphere.

Adhesive, adhesive coating means any chemical substance that is applied for the purpose of bonding two surfaces together. Products used on humans and animals, adhesive tape, contact paper, or any other product with an adhesive incorporated onto or in an inert substrate shall not be considered adhesives under this subpart.

Assembled on-road vehicle coating means any coating operation in which coating is applied to the surface of some component or surface of a fully assembled motor vehicle or trailer intended for on-road use including, but not limited to, components or surfaces on automobiles and light-duty trucks that have been repaired after a collision or otherwise repainted, fleet delivery trucks, and motor homes and other recreational vehicles (including camping trailers and fifth wheels). Assembled on-road vehicle coating includes the concurrent coating of parts of the assembled on-road vehicle that are painted off-vehicle to protect systems, equipment, or to allow full coverage. Assembled on-road vehicle coating does not include surface coating operations that meet the applicability criteria of the Automobiles and Light-Duty Trucks NESHAP. Assembled on-road vehicle coating also does not include the use of adhesives, sealants, and caulks used in assembling on-road vehicles.

Automotive lamp coating means any coating operation in which coating is applied to the surface of some component of the body of an exterior automotive lamp, including the application of reflective argent coatings and clear topcoats. Exterior automotive lamps include head lamps, tail lamps, turn signals, brake lights, and side marker lights. Automotive lamp coating does not include any coating operation performed on an assembled on-road vehicle.

Capture device means a hood, enclosure, room, floor sweep, or other means of containing or collecting emissions and directing those emissions into an add-on air pollution control device.

Capture efficiency or capture system efficiency means the portion (expressed as a percentage) of the pollutants from an emission source that is delivered to an add-on control device.

Capture system means one or more capture devices intended to collect emissions generated by a coating operation in the use of coatings or cleaning materials, both at the point of application and at subsequent points where emissions from the coatings and cleaning materials occur, such as flashoff, drying, or curing. As used in this subpart, multiple capture devices that collect emissions generated by a coating operation are considered a single capture system.

Cleaning material means a solvent used to remove contaminants and other materials, such as dirt, grease, oil, and dried or wet coating (*e.g.,* depainting), from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

Coating means a material applied to a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, sealants, liquid plastic coatings, caulks, inks, adhesives, and maskants. Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances, or paper film or plastic film which may be pre-coated with an adhesive by the film manufacturer, are not considered coatings for the purposes of this subpart. A liquid plastic coating means a coating made from fine particle-size polyvinyl chloride (PVC) in solution (also referred to as a plastisol).

Coating operation means equipment used to apply cleaning materials to a substrate to prepare it for coating application (surface preparation) or to remove dried coating; to apply coating to a substrate (coating application) and to dry or cure the coating after application; or to clean coating operation equipment (equipment cleaning). A single coating operation may include any combination of these types of equipment, but always includes at least the point at which a given quantity of coating or cleaning material is applied to a given part and all subsequent points in the affected source where organic HAP are emitted from the specific quantity of coating or cleaning material on the specific part. There may be multiple coating operations in an affected source. Coating application with handheld, non-refillable aerosol containers, touch-up markers, or marking pens is not a coating operation for the purposes of this subpart.

Coatings solids means the nonvolatile portion of the coating that makes up the dry film.

Continuous parameter monitoring system (CPMS) means the total equipment that may be required to meet the

data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of coating operation, or capture system, or add-on control device parameters.

Controlled coating operation means a coating operation from which some or all of the organic HAP emissions are routed through an emission capture system and add-on control device.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including but not limited to, any emission limit or operating limit or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, or operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Emission limitation means the aggregate of all requirements associated with a compliance option including emission limit, operating limit, work practice standard, etc.

Enclosure means a structure that surrounds a source of emissions and captures and directs the emissions to an add-on control device.

Exempt compound means a specific compound that is not considered a VOC due to negligible photochemical reactivity. The exempt compounds are listed in 40 CFR 51.100(s).

Facility maintenance means the routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity.

General use coating means any coating operation that is not an automotive lamp, TPO, or assembled on-road vehicle coating operation.

Hobby shop means any surface coating operation, located at an affected source, that is used exclusively for personal, noncommercial purposes by the affected source's employees or assigned personnel.

Manufacturer's formulation data means data on a material (such as a coating) that are supplied by the material manufacturer based on knowledge of the ingredients used to manufacture that material, rather than based on testing of the material with the test methods specified in §63.4541. Manufacturer's

formulation data may include, but are not limited to, information on density, organic HAP content, volatile organic matter content, and coating solids content.

Mass fraction of coating solids means the ratio of the mass of solids (also known as the mass of nonvolatiles) to the mass of a coating in which it is contained; kg of coating solids per kg of coating.

Mass fraction of organic HAP means the ratio of the mass of organic HAP to the mass of a material in which it is contained, expressed as kg of organic HAP per kg of material.

Month means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

Non-HAP coating means, for the purposes of this subpart, a coating that contains no more than 0.1 percent by mass of any individual organic HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and no more than 1.0 percent by mass for any other individual HAP.

Organic HAP content means the mass of organic HAP emitted per mass of coating solids used for a coating calculated using Equation 1 of §63.4541. The organic HAP content is determined for the coating in the condition it is in when received from its manufacturer or supplier and does not account for any alteration after receipt. For reactive adhesives in which some of the HAP react to form solids and are not emitted to the atmosphere, organic HAP content is the mass of organic HAP that is emitted, rather than the organic HAP content of the coating as it is received.

Permanent total enclosure (PTE) means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, 40 CFR part 51, for a PTE and that directs all the exhaust gases from the enclosure to an add-on control device.

Personal watercraft means a vessel (boat) which uses an inboard motor powering a water jet pump as its primary source of motive power and which is designed to be operated by a person or persons sitting, standing, or kneeling on the vessel, rather than in the conventional manner of sitting or standing inside the vessel.

Plastic part and product means any piece or combination of pieces of which at least one has been formed from one or more resins. Such pieces may be solid, porous, flexible or rigid.

Protective oil means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

Reactive adhesive means adhesive systems composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least 70 percent of the liquid components of the system, excluding water, react during the process.

Research or laboratory facility means a facility whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and is not engaged in the manufacture of final or intermediate products for commercial purposes, except in a *de minimis* manner.

Responsible official means responsible official as defined in 40 CFR 70.2.

Startup, initial means the first time equipment is brought online in a facility.

Surface preparation means use of a cleaning material on a portion of or all of a substrate. This includes use of a cleaning material to remove dried coating, which is sometimes called depainting.

Temporary total enclosure means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source as defined in Method 204 of appendix M, 40 CFR part 51.

Thermoplastic olefin (TPO) means polyolefins (blends of polypropylene, polyethylene and its copolymers). This also includes blends of TPO with polypropylene and polypropylene alloys including, but not limited to, thermoplastic elastomer (TPE), TPE polyurethane (TPU), TPE polyester (TPEE), TPE polyamide (TPAE), and thermoplastic elastomer polyvinyl chloride (TPVC).

Thermoplastic olefin (TPO) coating means any coating operation in which the coatings are components of a system of coatings applied to a TPO substrate, including adhesion promoters, primers, color coatings, clear coatings and topcoats. Thermoplastic olefin coating does not include the coating of TPO substrates on assembled on-road vehicles.

Thinner means an organic solvent that is added to a coating after the coating is received from the supplier.

Total volatile hydrocarbon (TVH) means the total amount of nonaqueous volatile organic matter determined according to Methods 204 and 204A through 204F of appendix M to 40 CFR part 51 and substituting the term TVH each place in the methods where the term VOC is used. The TVH includes both VOC and non-VOC.

Uncontrolled coating operation means a coating operation from which none of the organic HAP emissions are routed through an emission capture system and add-on control device.

Volatile organic compound (VOC) means any compound defined as VOC in 40 CFR 51.100(s).

Wastewater means water that is generated in a coating operation and is collected, stored, or treated prior to being discarded or discharged.

Table 1 to Subpart PPPP of Part 63—
Operating Limits if Using the Emission Rate With Add-On Controls Option

If you are required to comply with operating limits by §63.4491(c), you must comply with the applicable operating limits in the following table:

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to §63.4567(a).	i. Collecting the combustion temperature data according to §63.4568(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer	a. The average temperature measured just before the catalyst bed in any 3-hour period must not fall below the limit established according to §63.4567(b); and either	i. Collecting the temperature data according to §63.4568(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.
	b. Ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to §63.4567(b)(2); or	i. Collecting the temperature data according to §63.4568(c); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature difference at or above the temperature difference limit.
	c. Develop and implement an inspection and maintenance plan according to §63.4567(b)(4).	i. Maintaining an up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
		required by §63.4567(b)(4), you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.
3. Regenerative carbon adsorber	a. The total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each carbon bed regeneration cycle must not fall below the total regeneration desorbing gas mass flow limit established according to §63.4567(c); and	i. Measuring the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each regeneration cycle according to §63.4568(d); and ii. Maintaining the total regeneration desorbing gas mass flow at or above the mass flow limit.
	b. The temperature of the carbon bed, after completing each regeneration and any cooling cycle, must not exceed the carbon bed temperature limit established according to §63.4567(c).	i. Measuring the temperature of the carbon bed after completing each regeneration and any cooling cycle according to §63.4568(d); and ii. Operating the carbon beds such that each carbon bed is not returned to service until completing each regeneration and any cooling cycle until the recorded temperature of the carbon bed is at or below the temperature limit.
4. Condenser	a. The average condenser outlet (product side) gas temperature in any 3-hour period must not exceed the temperature limit established according to §63.4567(d).	i. Collecting the condenser outlet (product side) gas temperature according to §63.4568(e); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average gas temperature at the outlet at or below the temperature limit.
5. Concentrators, including zeolite wheels and rotary carbon adsorbers	a. The average gas temperature of the desorption concentrate stream in any 3-hour period must not fall below the limit established according to §63.4567(e); and	i. Collecting the temperature data according to §63.4568(f); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average temperature at or above the temperature limit.
	b. The average pressure drop of the dilute stream across the concentrator in any 3-hour period must not fall below the limit established according to §63.4567(e).	i. Collecting the pressure drop data according to §63.4568(f); ii. Reducing the pressure drop data to 3-hour block averages; and iii. Maintaining the 3-hour average pressure drop at or above the pressure drop limit.
6. Emission capture system that is a PTE according to §63.4565(a)	a. The direction of the air flow at all times must be into the enclosure; and either	i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to §63.4568(g)(1) or the pressure drop across the enclosure according to §63.4568(g)(2); and ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.
	b. The average facial velocity of air through all natural draft openings in the enclosure must be at least	i. *See* items 6.a.i and 6.a.ii.

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
	200 feet per minute; or	
	c. The pressure drop across the enclosure must be at least 0.007 inch H_2O, as established in Method 204 of appendix M to 40 CFR part 51.	i. *See* items 6.a.i and 6.a.ii.
7. Emission capture system that is not a PTE according to §63.4565(a)	a. The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to §63.4567(f).	i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to §63.4568(g); ii. Reducing the data to 3-hour block averages; and iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit.

Table 2 to Subpart PPPP of Part 63—
Applicability of General Provisions to Subpart PPPP of Part 63

You must comply with the applicable General Provisions requirements according to the following table

Citation	Subject	Applicable to subpart PPPP	Explanation
§63.1(a)(1)–(14)	General Applicability	Yes.	
§63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability to subpart PPPP is also specified in §63.4481.
§63.1(c)(1)	Applicability After Standard Established	Yes.	
§63.1(c)(2)–(3)	Applicability of Permit Program for Area Sources	No	Area sources are not subject to subpart PPPP.
§63.1(c)(4)–(5)	Extensions and Notifications	Yes.	
§63.1(e)	Applicability of Permit Program Before Relevant Standard is Set	Yes.	
§63.2	Definitions	Yes	Additional definitions are specified in §63.4581.
§63.3(a)–(c)	Units and Abbreviations	Yes.	
§63.4(a)(1)–(5)	Prohibited Activities	Yes.	
§63.4(b)–(c)	Circumvention/Severability	Yes.	
§63.5(a)	Construction/Reconstruction	Yes.	
§63.5(b)(1)–(6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources	Yes.	
§63.5(d)	Application for Approval of Construction/Reconstruction	Yes.	
§63.5(e)	Approval of Construction/Reconstruction	Yes.	
§63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review	Yes.	
§63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability	Yes.	
§63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources	Yes	Section 63.4483 specifies the compliance dates.
§63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	Section 63.4483 specifies the compliance dates.
§63.6(e)(1)–(2)	Operation and Maintenance	Yes.	
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	Yes	Only sources using an add-on control device to comply with the standard must complete startup, shutdown, and malfunction plans.
§63.6(f)(1)	Compliance Except During Startup, Shutdown, and	Yes	Applies only to sources using an add-on control device to comply with the standard.

Citation	Subject	Applicable to subpart PPPP	Explanation
	Malfunction		
§63.6(f)(2)–(3)	Methods for Determining Compliance	Yes.	
§63.6(g)(1)–(3)	Use of an Alternative Standard	Yes.	
§63.6(h)	Compliance With Opacity/Visible Emission Standards	No	Subpart PPPP does not establish opacity standards and does not require continuous opacity monitoring systems (COMS).
§63.6(i)(1)–(16)	Extension of Compliance	Yes.	
§63.6(j)	Presidential Compliance Exemption	Yes.	
§63.7(a)(1)	Performance Test Requirements—Applicability	Yes	Applies to all affected sources. Additional requirements for performance testing are specified in §§63.4564, 63.4565, and 63.4566.
§63.7(a)(2)	Performance Test Requirements—Dates	Yes	Applies only to performance tests for capture system and control device efficiency at sources using these to comply with the standards. Section 63.4560 specifies the schedule for performance test requirements that are earlier than those specified in §63.7(a)(2).
§63.7(a)(3)	Performance Tests Required By the Administrator	Yes.	
§63.7(b)–(e)	Performance Test Requirements—Notification, Quality Assurance, Facilities Necessary for Safe Testing, Conditions During Test	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standards.
§63.7(f)	Performance Test Requirements—Use Alternative Test Method	Yes	Applies to all test methods except those of used to determine capture system efficiency.
§63.7(g)–(h)	Performance Test Requirements—Data Analysis, Recordkeeping, Reporting, Waiver of Test	Yes	Applies only to performance tests for capture system and add-on control device efficiency at sources using these to comply with the standards.
§63.8(a)(1)–(3)	Monitoring Requirements—Applicability	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standards. Additional requirements for monitoring are specified in §63.4568.
§63.8(a)(4)	Additional Monitoring Requirements	No	Subpart PPPP does not have monitoring requirements for flares.
§63.8(b)	Conduct of Monitoring	Yes.	
§63.8(c)(1)–(3)	Continuous Monitoring Systems (CMS) Operation and Maintenance	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standard. Additional requirements for CMS

Citation	Subject	Applicable to subpart PPPP	Explanation
			operations and maintenance are specified in §63.4568.
§63.8(c)(4)	CMS	No	Section 63.4568 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§63.8(c)(5)	COMS	No	Subpart PPPP does not have opacity or visible emission standards.
§63.8(c)(6)	CMS Requirements	No	Section 63.4568 specifies the requirements for monitoring systems for capture systems and add-on control devices at sources using these to comply.
§63.8(c)(7)	CMS Out-of-Control Periods	Yes.	
§63.8(c)(8)	CMS Out-of-Control Periods and Reporting	No	Section 63.4520 requires reporting of CMS out-of-control periods.
§63.8(d)–(e)	Quality Control Program and CMS Performance Evaluation	No	Subpart PPPP does not require the use of continuous emissions monitoring systems.
§63.8(f)(1)–(5)	Use of an Alternative Monitoring Method	Yes.	
§63.8(f)(6)	Alternative to Relative Accuracy Test	No	Subpart PPPP does not require the use of continuous emissions monitoring systems.
§63.8(g)(1)–(5)	Data Reduction	No	Sections 63.4567 and 63.4568 specify monitoring data reduction.
§63.9(a)–(d)	Notification Requirements	Yes.	
§63.9(e)	Notification of Performance Test	Yes	Applies only to capture system and add-on control device performance tests at sources using these to comply with the standards.
§63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart PPPP does not have opacity or visible emission standards.
§63.9(g)(1)–(3)	Additional Notifications When Using CMS	No	Subpart PPPP does not require the use of continuous emissions monitoring systems.
§63.9(h)	Notification of Compliance Status	Yes	Section 63.4510 specifies the dates for submitting the notification of compliance status.
§63.9(i)	Adjustment of Submittal Deadlines	Yes.	
§63.9(j)	Change in Previous Information	Yes.	
§63.10(a)	Recordkeeping/Reporting—Applicability and General Information	Yes.	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	Additional requirements are specified in §§63.4530 and 63.4531.
§63.10(b)(2) (i)–(v)	Recordkeeping Relevant to Startup, Shutdown, and	Yes	Requirements for startup, shutdown, and malfunction records only apply to add-on

Citation	Subject	Applicable to subpart PPPP	Explanation
	Malfunction Periods and CMS		control devices used to comply with the standards.
§63.10(b)(2) (vi)–(xi)		Yes.	
§63.10(b)(2) (xii)	Records	Yes.	
§63.10(b)(2) (xiii)		No	Subpart PPPP does not require the use of continuous emissions monitoring systems.
§63.10(b)(2) (xiv)		Yes.	
§63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations	Yes.	
§63.10(c)(1)–(6)	Additional Recordkeeping Requirements for Sources with CMS	Yes	
§63.10(c)(7)–(8)		No	The same records are required in §63.4520(a)(7).
§63.10(c)(9)–(15)		Yes.	
§63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in §63.4520.
§63.10(d)(2)	Report of Performance Test Results	Yes	Additional requirements are specified in §63.4520(b).
§63.10(d)(3)	Reporting Opacity or Visible Emissions Observations	No	Subpart PPPP does not require opacity or visible emissions observations.
§63.10(d)(4)	Progress Reports for Sources With Compliance Extensions	Yes.	
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	Yes	Applies only to add-on control devices at sources using these to comply with the standards.
§63.10(e)(1)–(2)	Additional CMS Reports	No	Subpart PPPP does not require the use of continuous emissions monitoring systems.
§63.10(e)(3)	Excess Emissions/CMS Performance Reports	No	Section 63.4520(b) specifies the contents of periodic compliance reports.
§63.10(e)(4)	COMS Data Reports	No	Subpart PPPP does not specify requirements for opacity or COMS.
§63.10(f)	Recordkeeping/Reporting Waiver	Yes.	
§63.11	Control Device Requirements/Flares	No	Subpart PPPP does not specify use of flares for compliance.
§63.12	State Authority and Delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by Reference	Yes.	
§63.15	Availability of Information/Confidentiality	Yes.	

Table 3 to Subpart PPPP of Part 63—
Default Organic HAP Mass Fraction for Solvents and Solvent Blends

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data and which match either the solvent blend name or the chemical abstract series (CAS) number. If a solvent blend matches both the name and CAS number for an entry, that entry's organic HAP mass fraction must be used for that solvent blend. Otherwise, use the organic HAP mass fraction for the entry matching either the solvent blend name or CAS number, or use the organic HAP mass fraction from table 4 to this subpart if neither the name or CAS number match.

Solvent/solvent blend	CAS. No.	Average organic HAP mass fraction	Typical organic HAP, percent by mass
1. Toluene	108–88–3	1.0	Toluene.
2. Xylene(s)	1330–20–7	1.0	Xylenes, ethylbenzene.
3. Hexane	110–54–3	0.5	n-hexane.
4. n-Hexane	110–54–3	1.0	n-hexane.
5. Ethylbenzene	100–41–4	1.0	Ethylbenzene.
6. Aliphatic 140		0	None.
7. Aromatic 100		0.02	1% xylene, 1% cumene.
8. Aromatic 150		0.09	Naphthalene.
9. Aromatic naphtha	64742–95–6	0.02	1% xylene, 1% cumene.
10. Aromatic solvent	64742–94–5	0.1	Naphthalene.
11. Exempt mineral spirits	8032–32–4	0	None.
12. Ligroines (VM & P)	8032–32–4	0	None.
13. Lactol spirits	64742–89–6	0.15	Toluene.
14. Low aromatic white spirit	64742–82–1	0	None.
15. Mineral spirits	64742–88–7	0.01	Xylenes.
16. Hydrotreated naphtha	64742–48–9	0	None.
17. Hydrotreated light distillate	64742–47–8	0.001	Toluene.
18. Stoddard solvent	8052–41–3	0.01	Xylenes.
19. Super high-flash naphtha	64742–95–6	0.05	Xylenes.
20. Varsol®solvent	8052–49–3	0.01	0.5% xylenes, 0.5% ethylbenzene.
21. VM & P naphtha	64742–89–8	0.06	3% toluene, 3% xylene.
22. Petroleum distillate mixture	68477–31–6	0.08	4% naphthalene, 4% biphenyl.

Table 4 to Subpart PPPP of Part 63—
Default Organic HAP Mass Fraction for Petroleum Solvent Groups[a]

You may use the mass fraction values in the following table for solvent blends for which you do not have test data or manufacturer's formulation data.

Solvent type	Average organic HAP mass fraction	Typical organic HAP, percent by mass
Aliphatic[b]	0.03	1% Xylene, 1% Toluene, and 1% Ethylbenzene.
Aromatic[c]	0.06	4% Xylene, 1% Toluene, and 1% Ethylbenzene.

[a]Use this table only if the solvent blend does not match any of the solvent blends in Table 3 to this subpart by either solvent blend name or CAS number and you only know whether the blend is aliphatic or aromatic.
[b]Mineral Spirits 135, Mineral Spirits 150 EC, Naphtha, Mixed Hydrocarbon, Aliphatic Hydrocarbon, Aliphatic Naphtha, Naphthol Spirits, Petroleum Spirits, Petroleum Oil, Petroleum Naphtha, Solvent Naphtha, Solvent Blend.
[c]Medium-flash Naphtha, High-flash Naphtha, Aromatic Naphtha, Light Aromatic Naphtha, Light Aromatic Hydrocarbons, Aromatic Hydrocarbons, Light Aromatic Solvent.

Appendix A to Subpart PPPP of Part 63—
Determination of Weight Volatile Matter Content and Weight Solids Content of Reactive Adhesives

1.0 Applicability and Principle

1.1 *Applicability:* This method applies to the determination of weight volatile matter content and weight solids content for most one-part or multiple-part reactive adhesives. Reactive adhesives are composed, in large part, of monomers that react during the adhesive curing reaction, and, as a result, do not volatilize. The monomers become integral parts of the cured adhesive through chemical reaction. At least 70 weight percent of the system, excluding water and non-volatile solids such as fillers, react during the process. This method is not appropriate for cyanoacrylates. For cyanoacrylates, South Coast Air Quality Management District Test Method 316B should be used. This method is not appropriate for one-part moisture cure urethane adhesives or for silicone adhesives. For one-part moisture cure urethane adhesives and for silicone adhesives, EPA Method 24 should be used.

1.2 Principle: One-part and multiple-part reactive adhesives undergo a reactive conversion from liquid to solid during the application and assembly process. Reactive adhesives are applied to a single surface, but then are usually quickly covered with another mating surface to achieve a bonded assembly. The monomers employed in such systems typically react and are converted to non-volatile solids. If left uncovered, as in a Method 24 (ASTM D2369) test, the reaction is inhibited by the presence of oxygen and volatile loss of the reactive components competes more heavily with the cure reaction. If this were to happen under normal use conditions, the adhesives would not provide adequate performance. This method minimizes this undesirable deterioration of the adhesive performance.

2.0 Materials and Apparatus

2.1 Aluminum foil, aluminum sheet, non-leaching plastic film or non-leaching plastic sheet, approximately 3 inches by 3 inches. Precondition the foil, film, or sheet for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the foil, film, or sheet.

2.2 Flat, rigid support panels slightly larger than the foil, film, or sheet. Polypropylene with a minimum thickness of1/8inch is recommended for the support panels. Precondition the support panels for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the support panels.

2.3 Aluminum spacers,1/8inch thick. Precondition the spacers for 30 minutes in an oven at 110 ±5 degrees Celsius and store in a desiccator prior to use. Use tongs or rubber gloves or both to handle the spacers.

2.4 Forced draft oven, type IIA or IIB as specified in ASTM E145–94 (Reapproved 2001), “Standard Specification for Gravity-Convection and Forced-Ventilation Ovens” (incorporated by reference, see §63.14).

2.5 Electronic balance capable of weighing to ±0.0001 grams (0.1 mg).

2.6 Flat bottom weight (approximately 3 lbs) or clamps.

Material and Apparatus Notes
1 — The foil, film, or sheet should be thick or rigid enough so that it can be easily handled in the test procedure.

3.0 Procedure

3.1 Two procedures are provided. In Procedure A the initial specimen weight is determined by weighing the foil, film, or sheet before and after the specimen is dispensed onto the foil, film, or sheet. In Procedure B the initial specimen weight is determined by weighing the adhesive cartridge (kit) before and after the specimen is dispensed.

3.2 At least four test specimens should be run for each test material. Run the test at room temperature, 74 degrees Fahrenheit (23 degrees Celsius).

Procedure A

1. Zero electronic balance.
2. Place 2 pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.
3. Record weight of aluminum foils. (A).
4. Tare balance.
5. Remove top piece of aluminum foil.
6. Dispense a 10 to 15 gram specimen of premixed adhesive onto bottom piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.
7. Record weight of sandwich (specimen and aluminum foils). (B).
8. Remove sandwich from scale, place sandwich between two support panels with aluminum spacers at the edges of the support panels to make a supported sandwich. The spacers provide a standard gap. Take care to mate the edges.
9. Place the supported sandwich on a flat surface.
10. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.
11. Allow to cure 24 hours.
12. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).
13. Bake sandwich at 110 degrees Celsius for 1 hour.
14. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature. Record post bake sandwich weight. (D).

Procedure B

1. Zero electronic balance.
2. Place two pieces of aluminum foil (or aluminum sheet, plastic film, or plastic sheet) on scale.
3. Record weight of aluminum foils. (A).
4. Tare balance.

5. Place one support panel on flat surface. Place first piece of aluminum foil on top of this support panel.
6. Record the weight of a pre-mixed sample of adhesive in its container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (F).
7. Dispense a 10 to 15 gram specimen of mixed adhesive onto the first piece of aluminum foil. Place second piece of aluminum foil on top of the adhesive specimen to make a sandwich.
8. Record weight of the adhesive container. If dispensing the adhesive from a cartridge (kit), record the weight of the cartridge (kit) plus any dispensing tips. (G).
9. Place the aluminum spacers at the edges of the bottom support panel polypropylene sheet. The spacers provide a standard gap.
10. Place the second support panel on top of the assembly to make a supported sandwich. Take care to mate the edges.
11. Place the supported sandwich on a flat surface.
12. Place the weight on top of the supported sandwich to spread the adhesive specimen to a uniform thickness within the sandwich. Check that no adhesive squeezes out from between the pieces of aluminum foil or through tears in the aluminum foil.
13. Allow to cure 24 hours.
14. Remove the sandwich from between the support panels. Record the weight of the sandwich. This is referred to as the 24 hr weight. (C).
15. Bake sandwich at 110 degrees Celsius for 1 hour.
16. Remove sandwich from the oven, place immediately in a desiccator, and cool to room temperature.
17. Record post-bake sandwich weight. (D).

Procedural Notes

1 — The support panels may be omitted if the aluminum foil (or aluminum sheet, plastic film, or plastic sheet) will not tear and the adhesive specimen will spread to a uniform thickness within the sandwich when the flat weight is placed directly on top of the sandwich.

2 — Clamps may be used instead of a flat bottom weight to spread the adhesive specimen to a uniform thickness within the sandwich.

3 — When dispensing from a static mixer, purging is necessary to ensure uniform, homogeneous specimens. The weighing in Procedure B, Step 6 must be performed after any purging.

4 — Follow the adhesive manufacturer's directions for mixing and for dispensing from a cartridge (kit).

4.0 Calculations

4.1 The total weight loss from curing and baking of each specimen is used to determine the weight percent volatile matter content of that specimen

Procedure A

Weight of original specimen (S) = (B)−(A)
Weight of post-bake specimen (P) = (D)−(A)
Total Weight Loss (L) = (S)−(P)

Procedure B

Weight of original specimen (S) = (F)−(G)
Weight of post-bake specimen (P) = (D)−(A)
Total Weight Loss (L) = (S)−(P)
Procedure A and Procedure B
Weight Percent Volatile Matter Content
(V) = [(Total weight loss)/(Initial specimen weight)] × 100 = [(L)/(S)] × 100

4.2 The weight volatile matter content of a material is the average of the weight volatile matter content of each specimen of that material. For example, if four specimens of a material were tested, then the weight percent volatile matter content for that material is:

V = [V1 + V2 + V3 + V4]/4

Where:

Vi = the weight percent volatile matter content of specimen i of the material.

4.3 The weight percent solids content of the material is calculated from the weight percent volatile content of the material.

Weight Percent Solids Content (N) = 100−(V)

Calculation Notes

1 — The weight loss during curing and the weight loss during baking may be calculated separately. These values may be useful for identifying sources of variation in the results obtained for different specimens of the same material.

2 — For both Procedure A and Procedure B, the weight loss during curing is (S)−[(C)−(A)] and the weight loss during baking is (C)−(D).

Section PP 40 CFR 63, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e. , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of

Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.42c Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO_2 emissions limit or the 90 percent SO_2 reduction

requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate or numerical SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/hr); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:
E_s= SO_2 emission limit, expressed in ng/J or lb/MMBtu heat input;
K_a= 520 ng/J (1.2 lb/MMBtu);
K_b= 260 ng/J (0.60 lb/MMBtu);
K_c= 215 ng/J (0.50 lb/MMBtu);
H_a= Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];
H_b= Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and
$H_c K_a H_b$= Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2 emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e) (1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a

mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2 emissions is not subject to the PM limit in this section.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO_2 emission limits under §60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} ($E_{ho}o$) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao} ($E_{ao}o$). The $E_{ho}o$ is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

Where:

$E_{ho}o$ = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w= SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w= 0.

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as

determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:
$\%P_s$= Potential SO_2 emission rate, in percent;
$\%R_g$= SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and
$\%R_f$= SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g(\%R_go)$ is computed from $E_{ao}o$ from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate ($E_{ai}o$) using the following formula:

$$\%R_go = 100\left(1 - \frac{E_{ao}^{\circ}}{E_{ai}^{\circ}}\right)$$

Where:
$\%R_go$ = Adjusted $\%R_g$, in percent;
$E_{ao}o$ = Adjusted E_{ao}, ng/J (lb/MMBtu); and
$E_{ai}o$ = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

(ii) To compute $E_{ai}o$, an adjusted hourly SO_2 inlet rate ($E_{hi}o$) is used. The $E_{hi}o$ is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:
$E_{hi}o$ = Adjusted E_{hi}, ng/J (lb/MMBtu);
E_{hi}= Hourly SO_2 inlet rate, ng/J (lb/MMBtu);
E_w= SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w= 0; and
X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3 of appendix A of this part shall be used for gas analysis when applying Method 5, 5B, or 17 of appendix A of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2 or CO_2 measurements and PM measurements obtained under this section,

(ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A of this part (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with EPA Reference Method 5, 5B, or 17 of appendix A of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 of appendix A of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(13) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (d)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (d)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (d)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2 (or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraph (d)(7)(i) of this section.

(i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.

(ii) For O_2 (or CO_2), EPA reference Method 3, 3A, or 3B of appendix A of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either O_2 or CO_2 concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO_2 concentrations and either O_2 or CO_2 concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B of appendix A of this

part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and CO_2 measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All COMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.06 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO_2 or PM emissions are not required to operate a CEMS for measuring opacity if they follow the applicable procedures under §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the output of the system, for PM emissions discharged to the atmosphere as specified in §60.45c(d). The CEMS specified in paragraph §60.45c(d) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span

adjustments.

(e) An affected facility that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS for measuring opacity. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section.

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. At least two data points per hour must be used to calculate each 1-hour average.

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An affected facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the appropriate delegated permitting authority is not required to operate a COMS for measuring opacity. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator

will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) The owner or operator of each coal-fired, oil-fired, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g) (1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual

capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

Section QQ 40 CFR 63, Subpart FFFF--National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

Source: 68 FR 63888, Nov. 10, 2003, unless otherwise noted.

What This Subpart Covers

§ 63.2430 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous organic chemical manufacturing. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limits, operating limits, and work practice standards.

§ 63.2435 Am I subject to the requirements in this subpart?

(a) You are subject to the requirements in this subpart if you own or operate miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source of hazardous air pollutants (HAP) emissions as defined in section 112(a) of the Clean Air Act (CAA).

(b) An MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in §63.2550, that satisfies all of the conditions specified in paragraphs (b)(1) through (3) of this section. An MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in paragraphs (b)(1)(i) through (v) of this section.

(1) The MCPU produces material or family of materials that is described in paragraph (b)(1)(i), (ii), (iii), (iv), or (v) of this section.

(i) An organic chemical(s) classified using the 1987 version of SIC code 282, 283, 284, 285, 286, 287, 289, or 386, except as provided in paragraph (c)(5) of this section.

(ii) An organic chemical(s) classified using the 1997 version of NAICS code 325, except as provided in paragraph (c)(5) of this section.

(iii) Quaternary ammonium compounds and ammonium sulfate produced with caprolactam.

(iv) Hydrazine.

(v) Organic solvents classified in any of the SIC or NAICS codes listed in paragraph (b)(1)(i) or (ii) of this section that are recovered using nondedicated solvent recovery operations.

(2) The MCPU processes, uses, or generates any of the organic HAP listed in section 112(b) of the CAA or hydrogen halide and halogen HAP, as defined in §63.2550.

(3) The MCPU is not an affected source or part of an affected source under another subpart of this part 63, except for process vents from batch operations within a chemical manufacturing process unit (CMPU), as identified in §63.100(j)(4). For this situation, the MCPU is the same as the CMPU as defined in §63.100, and you are subject only to the requirements for batch process vents in this subpart.

(c) The requirements in this subpart do not apply to the operations specified in paragraphs (c)(1) through (7) of this section.

(1) Research and development facilities, as defined in section 112(c)(7) of the CAA.

(2) The manufacture of ammonium sulfate as a by-product, if the slurry entering the by-product manufacturing process contains 50 parts per million by weight (ppmw) HAP or less or 10 ppmw benzene or less. You must retain information, data, and analysis to document the HAP concentration in the entering slurry in order to claim this exemption.

(3) The affiliated operations located at an affected source under subparts GG (National Emission Standards for Aerospace Manufacturing and Rework Facilities), KK (National Emission Standards for the Printing and Publishing Industry), JJJJ (NESHAP: Paper and Other Web Coating), future MMMM (NESHAP: Surface Coating of Miscellaneous Metal Parts and Products), and SSSS (NESHAP: Surface Coating of Metal Coil) of this part 63. Affiliated operations include, but are not limited to, mixing or dissolving of coating ingredients; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater.

(4) Fabricating operations (such as spinning or compressing a solid polymer into its end use); compounding operations (in which blending, melting, and resolidification of a solid polymer product occur for the purpose of incorporating additives, colorants, or stabilizers); and extrusion and drawing operations (converting an already produced solid polymer into a different shape by melting or mixing the polymer and then forcing it or pulling it through an orifice to create an extruded product). An operation is not exempt if it involves processing with HAP solvent or if an intended purpose of the operation is to remove residual HAP monomer.

(5) Production activities described using the 1997 version of NAICS codes 325131, 325181, 325188 (except the requirements do apply to hydrazine), 325314, 325991 (except the requirements do apply to reformulating plastics resins from recycled plastics products), and 325992 (except the requirements do apply to photographic chemicals).

(6) Tall oil recovery systems.

(7) Carbon monoxide production.

(d) If the predominant use of a transfer rack loading arm or storage tank (including storage tanks in series) is associated with a miscellaneous organic chemical manufacturing process, and the loading arm or storage tank is not part of an affected source under a subpart of this part 63, then you must assign the loading arm or storage tank to the MCPU for that miscellaneous organic chemical manufacturing process. If the predominant use cannot be determined, then you may assign the loading arm or storage tank to any MCPU that shares it and is subject to this subpart. If the use varies from year to year, then you must base the determination on the utilization that occurred during the year preceding November 10, 2003 or, if the loading arm or storage tank was not in operation during that year, you must base the use on the expected use for the first 5-year period after startup. You must include the determination in the notification of compliance status report specified in §63.2520(d). You must redetermine the primary use at least once every 5 years, or any time you implement emissions averaging or pollution prevention after the compliance date.

(e) For nondedicated equipment used to create at least one MCPU, you may elect to develop process unit groups (PUG), determine the primary product of each PUG, and comply with the requirements of the subpart in 40 CFR part 63 that applies to that primary product as specified in §63.2535(l).

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40331, July 14, 2006]

§ 63.2440 What parts of my plant does this subpart cover?

(a) This subpart applies to each miscellaneous organic chemical manufacturing affected source.

(b) The miscellaneous organic chemical manufacturing affected source is the facilitywide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials described in §63.2435(b)(1).

(c) A new affected source is described by either paragraph (c)(1) or (2) of this section.

(1) Each affected source defined in paragraph (b) of this section for which you commenced construction or reconstruction after April 4, 2002, and you meet the applicability criteria at the time

you commenced construction or reconstruction.

(2) Each dedicated MCPU that has the potential to emit 10 tons per year (tpy) of any one HAP or 25 tpy of combined HAP, and you commenced construction or reconstruction of the MCPU after April 4, 2002. For the purposes of this paragraph, an MCPU is an affected source in the definition of the term “reconstruction” in §63.2.

(d) An MCPU that is also a CMPU under §63.100 is reconstructed for the purposes of this subpart if, and only if, the CMPU meets the requirements for reconstruction in §63.100(l)(2).

Compliance Dates

§ 63.2445 When do I have to comply with this subpart?

(a) If you have a new affected source, you must comply with this subpart according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you startup your new affected source before November 10, 2003, then you must comply with the requirements for new sources in this subpart no later than November 10, 2003.

(2) If you startup your new affected source after November 10, 2003, then you must comply with the requirements for new sources in this subpart upon startup of your affected source.

(b) If you have an existing source on November 10, 2003, you must comply with the requirements for existing sources in this subpart no later than May 10, 2008.

(c) You must meet the notification requirements in §63.2515 according to the dates specified in that section and in subpart A of this part 63. Some of the notifications must be submitted before you are required to comply with the emission limits, operating limits, and work practice standards in this subpart.

(d) If you have a Group 2 emission point that becomes a Group 1 emission point after the compliance date for your affected source, you must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

(e) If, after the compliance date for your affected source, hydrogen halide and halogen HAP emissions from process vents in a process increase to more than 1,000 lb/yr, or HAP metals emissions from a process at a new affected source increase to more than 150 lb/yr, you must comply with the applicable emission limits specified in Table 3 to this subpart and the associated compliance requirements beginning on the date the emissions exceed the applicable threshold. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

(f) If you have a small control device for process vent or transfer rack emissions that becomes a large control device, as defined in §63.2550(i), you must comply with monitoring and associated recordkeeping and reporting requirements for large control devices beginning on the date the switch occurs. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 10442, Mar. 1, 2006; 71 FR 40332, July 14, 2006]

Emission Limits, Work Practice Standards, and Compliance Requirements

§ 63.2450 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits and work practice standards in tables 1 through 7 to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in §§63.2455 through 63.2490 (or the alternative means of compliance in §63.2495, §63.2500, or §63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in §§63.2515, 63.2520, and 63.2525.

(b) Determine halogenated vent streams. You must determine if an emission stream is a halogenated vent stream, as defined in §63.2550, by calculating the mass emission rate of halogen atoms in accordance with §63.115(d)(2)(v). Alternatively, you may elect to designate the emission stream as halogenated.

(c) Requirements for combined emission streams. When organic HAP emissions from different emission types (e.g., continuous process vents, batch process vents, storage tanks, transfer operations, and waste management units) are combined, you must comply with the requirements of either paragraph (c)(1) or (2) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of organic HAP emissions in the stream (e.g., the requirements of table 1 to this subpart for continuous process vents and the requirements of table 4 to this subpart for emissions from storage tanks).

(2) Determine the applicable requirements based on the hierarchy presented in paragraphs (c)(2)(i) through (vi) of this section. For a combined stream, the applicable requirements are specified in the highest-listed paragraph in the hierarchy that applies to any of the individual streams that make up the combined stream. For example, if a combined stream consists of emissions from Group 1 batch process vents and any other type of emission stream, then you must comply with the requirements in paragraph (c)(2)(i) of this section for the combined stream; compliance with the requirements in paragraph (c)(2)(i) of this section constitutes compliance for the other emission streams in the combined stream. Two exceptions are that you must comply with the requirements in table 3 to this subpart and §63.2465 for all process vents with hydrogen halide and halogen HAP emissions, and recordkeeping requirements for Group 2 applicability or compliance are still required (e.g., the requirement in §63.2525(f) to track the number of batches produced and calculate rolling annual emissions for processes with Group 2 batch process vents).

(i) The requirements of table 2 to this subpart and §63.2460 for Group 1 batch process vents, including applicable monitoring, recordkeeping, and reporting.

(ii) The requirements of table 1 to this subpart and §63.2455 for continuous process vents that are routed to a control device, as defined in §63.981, including applicable monitoring, recordkeeping, and reporting.

(iii) The requirements of table 5 to this subpart and §63.2475 for transfer operations, including applicable monitoring, recordkeeping, and reporting.

(iv) The requirements of table 7 to this subpart and §63.2485 for emissions from waste management units that are used to manage and treat Group 1 wastewater streams and residuals from Group 1 wastewater streams, including applicable monitoring, recordkeeping, and reporting.

(v) The requirements of table 4 to this subpart and §63.2470 for control of emissions from storage tanks, including applicable monitoring, recordkeeping, and reporting.

(vi) The requirements of table 1 to this subpart and §63.2455 for continuous process vents after a recovery device including applicable monitoring, recordkeeping, and reporting.

(d) [Reserved]

(e) Requirements for control devices.

(1) Except when complying with §63.2485, if you reduce organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare) or recovery devices, you must meet the requirements of §63.982(c) and the requirements referenced therein.

(2) Except when complying with §63.2485, if you reduce organic HAP emissions by venting emissions through a closed-vent system to a flare, you must meet the requirements of §63.982(b) and the requirements referenced therein.

(3) If you use a halogen reduction device to reduce hydrogen halide and halogen HAP emissions from halogenated vent streams, you must meet the requirements of §63.994 and the requirements referenced therein. If you use a halogen reduction device before a combustion device, you must determine the halogen atom emission rate prior to the combustion device according to the procedures in §63.115(d)(2)(v).

(f) Requirements for flare compliance assessments.

(1) As part of a flare compliance assessment required in §63.987(b), you have the option of demonstrating compliance with the requirements of §63.11(b) by complying with the requirements in either §63.11(b)(6)(i) or §63.987(b)(3)(ii).

(2) If you elect to meet the requirements in §63.11(b)(6)(i), you must keep flare compliance assessment records as specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) Keep records as specified in §63.998(a)(1)(i), except that a record of the heat content determination is not required.

(ii) Keep records of the flare diameter, hydrogen content, exit velocity, and maximum permitted velocity. Include these records in the flare compliance report required in §63.999(a)(2).

(g) Requirements for performance tests. The requirements specified in paragraphs (g)(1) through (5) of this section apply instead of or in addition to the requirements specified in subpart SS of this part 63.

(1) Conduct gas molecular weight analysis using Method 3, 3A, or 3B in appendix A to part 60 of this chapter.

(2) Measure moisture content of the stack gas using Method 4 in appendix A to part 60 of this chapter.

(3) If the uncontrolled or inlet gas stream to the control device contains carbon disulfide, you must conduct emissions testing according to paragraph (g)(3)(i) or (ii) of this section.

(i) If you elect to comply with the percent reduction emission limits in tables 1 through 7 to this subpart, and carbon disulfide is the principal organic HAP component (i.e., greater than 50 percent of the HAP in the stream by volume), then you must use Method 18, or Method 15 (40 CFR part 60, appendix A) to measure carbon disulfide at the inlet and outlet of the control device. Use the percent reduction in carbon disulfide as a surrogate for the percent reduction in total organic HAP emissions.

(ii) If you elect to comply with the outlet total organic compound (TOC) concentration emission limits in tables 1 through 7 to this subpart, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (volume concentration) carbon disulfide, you must use Method 18 or Method 15 to separately determine the carbon disulfide concentration. Calculate the total HAP or TOC emissions by totaling the carbon disulfide emissions measured using Method 18 or 15 and the other HAP emissions measured using Method 18 or 25A.

(4) As an alternative to using Method 18, Method 25/25A, or Method 26/26A of 40 CFR part 60, appendix A, to comply with any of the emission limits specified in tables 1 through 7 to this subpart, you may use Method 320 of 40 CFR part 60, appendix A. When using Method 320, you must follow the analyte spiking procedures of section 13 of Method 320, unless you demonstrate that the complete spiking procedure has been conducted at a similar source.

(5) Section 63.997(c)(1) does not apply. For the purposes of this subpart, results of all initial compliance demonstrations must be included in the notification of compliance status report, which is due 150 days after the compliance date, as specified in §63.2520(d)(1).

(h) Design evaluation. To determine the percent reduction of a small control device that is used to comply with an emission limit specified in table 1, 2, 3, or 5 to this subpart, you may elect to conduct a design evaluation as specified in §63.1257(a)(1) instead of a performance test as specified in subpart SS of this part 63. You must establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For transfer racks, the design evaluation must demonstrate that the control device achieves the required control efficiency during the reasonably expected maximum transfer loading rate.

(i) Outlet concentration correction for combustion devices. When §63.997(e)(2)(iii)(C) requires you to correct the measured concentration at the outlet of a combustion device to 3 percent oxygen if you add supplemental combustion air, the requirements in either paragraph (i)(1) or (2) of this section apply for the purposes of this subpart.

(1) You must correct the concentration in the gas stream at the outlet of the combustion device to 3 percent oxygen if you add supplemental gases, as defined in §63.2550, to the vent stream, or;

(2) You must correct the measured concentration for supplemental gases using Equation 1 of §63.2460; you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

(j) Continuous emissions monitoring systems. Each continuous emissions monitoring system (CEMS) must be installed, operated, and maintained according to the requirements in §63.8 and paragraphs (j)(1) through (5) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable Performance Specification of 40 CFR part 60, appendix B, and according to paragraph (j)(2) of this section, except as specified in paragraph (j)(1)(i) of this section. For any CEMS meeting Performance Specification 8, you must also comply with appendix F, procedure 1 of 40 CFR part 60.

(i) If you wish to use a CEMS other than an Fourier Transform Infrared Spectroscopy (FTIR) meeting the requirements of Performance Specification 15 to measure hydrogen halide and halogen HAP before we promulgate a Performance Specification for such CEMS, you must prepare a monitoring plan and submit it for approval in accordance with the procedures specified in §63.8.

(ii) [Reserved]

(2) You must determine the calibration gases and reporting units for TOC CEMS in accordance with paragraph (j)(2)(i), (ii), or (iii) of this section.

(i) For CEMS meeting Performance Specification 9 or 15 requirements, determine the target analyte(s) for calibration using either process knowledge of the control device inlet stream or the screening procedures of Method 18 on the control device inlet stream.

(ii) For CEMS meeting Performance Specification 8 used to monitor performance of a combustion device, calibrate the instrument on the predominant organic HAP and report the results as carbon (C1), and use Method 25A or any approved alternative as the reference method for the relative accuracy tests.

(iii) For CEMS meeting Performance Specification 8 used to monitor performance of a noncombustion device, determine the predominant organic HAP using either process knowledge or the screening procedures of Method 18 on the control device inlet stream, calibrate the monitor on the predominant organic HAP, and report the results as C_1. Use Method 18, ASTM D6420–99, or any approved alternative as the reference method for the relative accuracy tests, and report the results as C_1.

(3) You must conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to the applicable Performance Specification of 40 CFR part 60, appendix B, except that the schedule in §63.8(e)(4) does not apply, and the results of the performance evaluation must be included in the notification of compliance status report.

(4) The CEMS data must be reduced to operating day or operating block averages computed using valid data consistent with the data availability requirements specified in §63.999(c)(6)(i)(B) through (D), except monitoring data also are sufficient to constitute a valid hour of data if measured values are available for at least two of the 15-minute periods during an hour when calibration, quality assurance, or maintenance activities are being performed. An operating block is a period of time from the beginning to end of batch operations within a process. Operating block averages may be used only for batch process vent data.

(5) If you add supplemental gases, you must correct the measured concentrations in accordance with paragraph (i) of this section and §63.2460(c)(6).

(k) Continuous parameter monitoring. The provisions in paragraphs (k)(1) through (6) of this section apply in addition to the requirements for continuous parameter monitoring system (CPMS) in subpart SS of this part 63.

(1) You must record the results of each calibration check and all maintenance performed on the CPMS as specified in §63.998(c)(1)(ii)(A).

(2) When subpart SS of this part 63 uses the term “a range” or “operating range” of a monitored parameter, it means an “operating limit” for a monitored parameter for the purposes of this subpart.

(3) As an alternative to continuously measuring and recording pH as specified in §§63.994(c)(1)(i) and 63.998(a)(2)(ii)(D), you may elect to continuously monitor and record the caustic strength of the effluent. For halogen scrubbers used to control only batch process vents you may elect to monitor and record either the pH or the caustic strength of the scrubber effluent at least once per day.

(4) As an alternative to the inlet and outlet temperature monitoring requirements for catalytic incinerators as specified in §63.988(c)(2) and the related recordkeeping requirements specified in §63.998(a)(2)(ii)(B)(2) and (c)(2)(ii), you may elect to comply with the requirements specified in paragraphs (k)(4)(i) through (iv) of this section.

(i) Monitor and record the inlet temperature as specified in subpart SS of this part 63.

(ii) Check the activity level of the catalyst at least every 12 months and take any necessary corrective action, such as replacing the catalyst to ensure that the catalyst is performing as designed.

(iii) Maintain records of the annual checks of catalyst activity levels and the subsequent corrective actions.

(iv) Recording the downstream temperature and temperature difference across the catalyst bed as specified in §63.998(a)(2)(ii)(B)(2) and (b)(2)(ii) is not required.

(5) For absorbers that control organic compounds and use water as the scrubbing fluid, you must conduct monitoring and recordkeeping as specified in paragraphs (k)(5)(i) through (iii) of this section instead of the monitoring and recordkeeping requirements specified in §§63.990(c)(1), 63.993(c)(1), and 63.998(a)(2)(ii)(C).

(i) You must use a flow meter capable of providing a continuous record of the absorber influent liquid flow.

(ii) You must determine gas stream flow using one of the procedures specified in §63.994(c)(1)(ii)(A) through (D).

(iii) You must record the absorber liquid-to-gas ratio averaged over the time period of any performance test.

(6) For a control device with total inlet HAP emissions less than 1 tpy, you must establish an operating limit(s) for a parameter(s) that you will measure and record at least once per averaging period (i.e., daily or block) to verify that the control device is operating properly. You may elect to measure the same parameter(s) that is required for control devices that control inlet HAP emissions equal to or greater than 1 tpy. If the parameter will not be measured continuously, you must request approval of your proposed procedure in the precompliance report. You must identify the operating limit(s) and the measurement frequency, and you must provide rationale to support how these measurements demonstrate the control device is operating properly.

(l) Startup, shutdown, and malfunction. Sections 63.152(f)(7)(ii) through (iv) and 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of SSM from daily averages, do not apply for the purposes of this subpart.

(m) Reporting.

(1) When §§63.2455 through 63.2490 reference other subparts in this part 63 that use the term “periodic report,” it means “compliance report” for the purposes of this subpart. The compliance report must include the information specified in §63.2520(e), as well as the information specified in referenced subparts.

(2) When there are conflicts between this subpart and referenced subparts for the due dates of reports required by this subpart, reports must be submitted according to the due dates presented in this subpart.

(3) Excused excursions, as defined in subparts G and SS of this part 63, are not allowed.

(n) [Reserved]

(o) You may not use a flare to control halogenated vent streams or hydrogen halide and halogen HAP emissions.

(p) Opening a safety device, as defined in §63.2550, is allowed at any time conditions require it to avoid unsafe conditions.

(q) If an emission stream contains energetics or organic peroxides that, for safety reasons, cannot meet an applicable emission limit specified in Tables 1 through 7 to this subpart, then you must submit documentation in your precompliance report explaining why an undue safety hazard would be created if the air emission controls were installed, and you must describe the procedures that you will implement to minimize HAP emissions from these vent streams.

(r) Surge control vessels and bottoms receivers. For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, you must meet emission limits and work practice standards specified in Table 4 to this subpart.

(s) For the purposes of determining Group status for continuous process vents, batch process vents, and storage tanks in §§63.2455, 63.2460, and 63.2470, hydrazine is to be considered an organic HAP.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40332, July 14, 2006]

§ 63.2455 What requirements must I meet for continuous process vents?

(a) You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section.

(b) For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in §63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.

(1) You are not required to determine the Group status or the TRE index value for any continuous process vent that is combined with Group 1 batch process vents before a control device or recovery device because the requirements of §63.2450(c)(2)(i) apply to the combined stream.

(2) When a TRE index value of 4.0 is referred to in §63.115(d), TRE index values of 5.0 for existing affected sources and 8.0 for new and reconstructed affected sources apply for the purposes of this subpart.

(3) When §63.115(d) refers to “emission reductions specified in §63.113(a),” the reductions specified in Table 1 to this subpart apply for the purposes of this subpart.

(c) If you use a recovery device to maintain the TRE above a specified threshold, you must meet the requirements of §63.982(e) and the requirements referenced therein, except as specified in §63.2450 and paragraph (c)(1) of this section.

(1) When §63.993 uses the phrase “the TRE index value is between the level specified in a referencing subpart and 4.0,” the phrase “the TRE index value is >1.9 but ≤5.0” applies for an existing affected source, and the phrase “the TRE index value is >5.0 but ≤8.0” applies for a new and reconstructed affected source, for the purposes of this subpart.

(2) [Reserved]

§ 63.2460 What requirements must I meet for batch process vents?

(a) You must meet each emission limit in Table 2 to this subpart that applies to you, and you must meet each applicable requirement specified in paragraphs (b) and (c) of this section.

(b) Group status. If a process has batch process vents, as defined in §63.2550, you must determine the group status of the batch process vents by determining and summing the uncontrolled organic HAP emissions from each of the batch process vents within the process using the procedures specified in §63.1257(d)(2)(i) and (ii), except as specified in paragraphs (b)(1) through (7) of this section.

(1) To calculate emissions caused by the heating of a vessel without a process condenser to a temperature lower than the boiling point, you must use the procedures in §63.1257(d)(2)(i)(C)(3).

(2) To calculate emissions from depressurization of a vessel without a process condenser, you must use the procedures in §63.1257(d)(2)(i)(D)(10).

(3) To calculate emissions from vacuum systems for the purposes of this subpart, the receiving vessel is part of the vacuum system, and terms used in Equation 33 to 40 CFR part 63, subpart GGG, are defined as follows:

P_{system} = absolute pressure of the receiving vessel;
P_i = partial pressure of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;
P_j = partial pressure of condensables (including HAP) determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;
MWHAP = molecular weight of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.

(4) To calculate uncontrolled emissions when a vessel is equipped with a process condenser, you must use the procedures in §63.1257(d)(3)(i)(B), except as specified in paragraphs (b)(4)(i) through (vii) of this section.

(i) You must determine the flow rate of gas (or volume of gas), partial pressures of condensables, temperature (T), and HAP molecular weight (MW_{HAP}) at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.

(ii) You must assume that all of the components contained in the condenser exit vent stream are in equilibrium with the same components in the exit condensate stream (except for noncondensables).

(iii) You must perform a material balance for each component.

(iv) For the emissions from gas evolution, the term for time, t, must be used in Equation 12 to 40 CFR part 63, subpart GGG.

(v) Emissions from empty vessel purging shall be calculated using Equation 36 to 40 CFR part 63, subpart GGG and the exit temperature and exit pressure conditions of the condenser or the conditions of the dedicated receiver.

(vi) You must conduct an engineering assessment as specified in §63.1257(d)(2)(ii) for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum operations, gas evolution, air drying, or empty vessel purging. The requirements of paragraphs (b)(3) through (4) of this section shall apply.

(vii) You may elect to conduct an engineering assessment if you can demonstrate to the Administrator that the methods in §63.1257(d)(3)(i)(B) are not appropriate.

(5) You may elect to designate the batch process vents within a process as Group 1 and not calculate uncontrolled emissions under either of the situations in paragraph (b)(5)(i), (ii), or (iii) of this section.

(i) If you comply with the alternative standard specified in §63.2505.

(ii) If all Group 1 batch process vents within a process are controlled; you conduct the performance test under hypothetical worst case conditions, as defined in §63.1257(b)(8)(i)(B); and the emission profile is based on capture and control system limitations as specified in §63.1257(b)(8)(ii)(C).

(iii) If you comply with an emission limit using a flare that meets the requirements specified in §63.987.

(6) You may change from Group 2 to Group 1 in accordance with either paragraph (b)(6)(i) or (ii) of this section. You must comply with the requirements of this section and submit the test report in the next Compliance report.

(i) You may switch at any time after operating as Group 2 for at least 1 year so that you can show compliance with the 10,000 pounds per year (lb/yr) threshold for Group 2 batch process vents for at least 365 days before the switch. You may elect to start keeping records of emissions from Group 2 batch process vents before the compliance date. Report a switch based on this provision in your next compliance report in accordance with §63.2520(e)(10)(i).

(ii) If the conditions in paragraph (b)(6)(i) of this section are not applicable, you must provide a 60-day advance notice in accordance with §63.2520(e)(10)(ii) before switching.

(7) As an alternative to determining the uncontrolled organic HAP emissions as specified in §63.1257(d)(2)(i) and (ii), you may elect to demonstrate that non-reactive organic HAP are the only HAP used in the process and non-reactive HAP usage in the process is less than 10,000 lb/yr. You must provide data and supporting rationale in your notification of compliance status report explaining why the non-reactive organic HAP usage will be less

than 10,000 lb/yr. You must keep records of the non-reactive organic HAP usage as specified in §63.2525(e)(2) and include information in compliance reports as specified in §63.2520(e)(5)(iv).

(c) Exceptions to the requirements in subparts SS and WW of this part 63 are specified in paragraphs (c)(1) through (9) of this section.

(1) Process condensers. Process condensers, as defined in §63.2550(i), are not considered to be control devices for batch process vents. You must determine whether a condenser is a control device for a batch process vent or a process condenser from which the uncontrolled HAP emissions are evaluated as part of the initial compliance demonstration for each MCPU and report the results with supporting rationale in your notification of compliance status report.

(2) Initial compliance.

(i) To demonstrate initial compliance with a percent reduction emission limit in Table 2 to this subpart FFFF, you must compare the sums of the controlled and uncontrolled emissions for the applicable Group 1 batch process vents within the process, and show that the specified reduction is met. This requirement does not apply if you comply with the emission limits of Table 2 to this subpart FFFF by using a flare that meets the requirements of §63.987.

(ii) When you conduct a performance test or design evaluation for a non-flare control device used to control emissions from batch process vents, you must establish emission profiles and conduct the test under worst-case conditions according to §63.1257(b)(8) instead of under normal operating conditions as specified in §63.7(e)(1). The requirements in §63.997(e)(1)(i) and (iii) also do not apply for performance tests conducted to determine compliance with the emission limits for batch process vents. For purposes of this subpart FFFF, references in §63.997(b)(1) to “methods specified in §63.997(e)” include the methods specified in §63.1257(b)(8).

(iii) As an alternative to conducting a performance test or design evaluation to demonstrate initial compliance with a percent reduction requirement for a condenser, you may determine controlled emissions using the procedures specified in §63.1257(d)(3)(i)(B) and paragraphs (b)(3) through (4) of this section.

(iv) When §63.1257(d)(3)(i)(B)(7) specifies that condenser-controlled emissions from an air dryer must be calculated using Equation 11 of 40 CFR part 63, subpart GGG, with “V equal to the air flow rate,” it means “V equal to the dryer outlet gas flow rate,” for the purposes of this subpart. Alternatively, you may use Equation 12 of 40 CFR part 63, subpart GGG, with V equal to the dryer inlet air flow rate. Account for time as appropriate in either equation.

(v) If a process condenser is used for any boiling operations, you must demonstrate that it is properly operated according to the procedures specified in §63.1257(d)(2)(i)(C)(4)(ii) and (d)(3)(iii)(B), and the demonstration must occur only during the boiling operation. The reference in §63.1257(d)(3)(iii)(B) to the alternative standard in §63.1254(c) means §63.2505 for the purposes of this subpart. As an alternative to measuring the exhaust gas temperature, as required by §63.1257(d)(3)(iii)(B), you may elect to measure the liquid temperature in the receiver.

(vi) You must conduct a subsequent performance test or compliance demonstration equivalent to an initial compliance demonstration within 180 days of a change in the worst-case conditions.

(3) Establishing operating limits. You must establish operating limits under the conditions required for your initial compliance demonstration, except you may elect to establish operating limit(s) for conditions other than those under which a performance test was conducted as specified in paragraph (c)(3)(i) of this section and, if applicable, paragraph (c)(3)(ii) of this section.

(i) The operating limits may be based on the results of the performance test and supplementary information such as engineering assessments and manufacturer's recommendations. These limits may be established for conditions as unique as individual emission episodes for a batch process. You must provide rationale in the precompliance report for the specific level for each operating limit, including any data and calculations used to develop the limit and a description of why the limit indicates proper operation of the control device. The procedures provided in this paragraph (c)(3)(i) have not been

approved by the Administrator and determination of the operating limit using these procedures is subject to review and approval by the Administrator.

(ii) If you elect to establish separate monitoring levels for different emission episodes within a batch process, you must maintain records in your daily schedule or log of processes indicating each point at which you change from one operating limit to another, even if the duration of the monitoring for an operating limit is less than 15 minutes. You must maintain a daily schedule or log of processes according to §63.2525(c).

(4) Averaging periods. As an alternative to the requirement for daily averages in §63.998(b)(3), you may determine averages for operating blocks. An operating block is a period of time that is equal to the time from the beginning to end of batch process operations within a process.

(5) [Reserved]

(6) Outlet concentration correction for supplemental gases. If you use a control device other than a combustion device to comply with a TOC, organic HAP, or hydrogen halide and halogen HAP outlet concentration emission limit for batch process vents, you must correct the actual concentration for supplemental gases using Equation 1 of this section; you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

$$C_a = C_m \left(\frac{Q_s + Q_a}{Q_a} \right) \quad \text{(Eq. 1)}$$

Where:

C_a = corrected outlet TOC, organic HAP, or hydrogen halide and halogen HAP concentration, dry basis, ppmv;

C_m = actual TOC, organic HAP, or hydrogen halide and halogen HAP concentration measured at control device outlet, dry basis, ppmv;

Q_a = total volumetric flowrate of all gas streams vented to the control device, except supplemental gases;

Q_s = total volumetric flowrate of supplemental gases.

(7) If flow to a control device could be intermittent, you must install, calibrate, and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. Periods of no flow may not be used in daily or block averages, and it may not be used in fulfilling a minimum data availability requirement.

(8) Terminology. When the term “storage vessel” is used in subpart WW of this part 63, the term “process tank,” as defined in §63.2550(i), applies for the purposes of this section.

(9) Requirements for a biofilter. If you use a biofilter to meet either the 95 percent reduction requirement or outlet concentration requirement specified in Table 2 to this subpart, you must meet the requirements specified in paragraphs (c)(9)(i) through (iv) of this section.

(i) Operational requirements. The biofilter must be operated at all times when emissions are vented to it.

(ii) Performance tests. To demonstrate initial compliance, you must conduct a performance test according to the procedures in §63.997 and paragraphs (c)(9)(ii)(A) through (D) of this section. The design evaluation option for small control devices is not applicable if you use a biofilter.

(A) Keep up-to-date, readily accessible continuous records of either the biofilter bed temperature averaged over the full period of the performance test or the outlet total organic HAP or TOC concentration averaged over the full period of the performance test. Include these data in your notification of compliance status report as required by §63.999(b)(3)(ii).

(B) Record either the percent reduction of total organic HAP achieved by the biofilter determined as specified in §63.997(e)(2)(iv) or the concentration of TOC or total organic HAP determined as specified in §63.997(e)(2)(iii) at the outlet of the biofilter, as applicable.

(C) If you monitor the biofilter bed temperature, you may elect to use multiple

thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15 minute (or shorter) averages for purposes of establishing operating limits for the biofilter. If you use multiple thermocouples, include your rationale for their site selection in your notification of compliance status report.

(D) Submit a performance test report as specified in §63.999(a)(2)(i) and (ii). Include the records from paragraph (c)(9)(ii)(B) of this section in your performance test report.

(iii) Monitoring requirements. Use either a biofilter bed temperature monitoring device (or multiple devices) capable of providing a continuous record or an organic monitoring device capable of providing a continuous record. Keep records of temperature or other parameter monitoring results as specified in §63.998(b) and (c), as applicable. General requirements for monitoring are contained in §63.996. If you monitor temperature, the operating temperature range must be based on only the temperatures measured during the performance test; these data may not be supplemented by engineering assessments or manufacturer's recommendations as otherwise allowed in §63.999(b)(3)(ii)(A). If you establish the operating range (minimum and maximum temperatures) using data from previous performance tests in accordance with §63.996(c)(6), replacement of the biofilter media with the same type of media is not considered a process change under §63.997(b)(1). You may expand your biofilter bed temperature operating range by conducting a repeat performance test that demonstrates compliance with the 95 percent reduction requirement or outlet concentration limit, as applicable.

(iv) Repeat performance tests. You must conduct a repeat performance test using the applicable methods specified in §63.997 within 2 years following the previous performance test and within 150 days after each replacement of any portion of

the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40333, July 14, 2006]

§ 63.2465 What requirements must I meet for process vents that emit hydrogen halide and halogen HAP or HAP metals?

(a) You must meet each emission limit in Table 3 to this subpart that applies to you, and you must meet each applicable requirement in paragraphs (b) through (d) of this section.

(b) If any process vents within a process emit hydrogen halide and halogen HAP, you must determine and sum the uncontrolled hydrogen halide and halogen HAP emissions from each of the process vents within the process using the procedures specified in §63.1257(d)(2)(i) and/or (ii), as appropriate. When §63.1257(d)(2)(ii)(E) requires documentation to be submitted in the precompliance report, it means the notification of compliance status report for the purposes of this paragraph.

(c) If collective uncontrolled hydrogen halide and halogen HAP emissions from the process vents within a process are greater than or equal to 1,000 pounds per year (lb/yr), you must comply with §63.994 and the requirements referenced therein, except as specified in paragraphs (c)(1) through (3) of this section.

(1) When §63.994(b)(1) requires a performance test, you may elect to conduct a design evaluation in accordance with §63.1257(a)(1).

(2) When §63.994(b)(1) refers to “a combustion device followed by a halogen scrubber or other halogen reduction device,” it means any combination of control devices used to meet the emission limits specified in Table 3 to this subpart.

(3) Section 63.994(b)(2) does not apply for the purposes of this section.

(d) To demonstrate compliance with the emission limit in Table 3 to this subpart for HAP metals at a new source, you must comply with paragraphs (d)(1) through (3) of this section.

(1) Determine the mass emission rate of HAP metals based on process knowledge, engineering assessment, or test data.

(2) Conduct an initial performance test of each control device that is used to comply with the emission limit for HAP metals specified in Table 3 to this subpart. Conduct the performance test according to the procedures in §63.997. Use Method 29 of appendix A of 40 CFR part 60 to determine the HAP metals at the inlet and outlet of each control device, or use Method 5 of appendix A of 40 CFR part 60 to determine the total particulate matter (PM) at the inlet and outlet of each control device. You have demonstrated initial compliance if the overall reduction of either HAP metals or total PM from the process is greater than or equal to 97 percent by weight.

(3) Comply with the monitoring requirements specified in §63.1366(b)(1)(xi) for each fabric filter used to control HAP metals.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40334, July 14, 2006]

§ 63.2470 What requirements must I meet for storage tanks?

(a) You must meet each emission limit in Table 4 to this subpart that applies to your storage tanks, and you must meet each applicable requirement specified in paragraphs (b) through (e) of this section.

(b) [Reserved]

(c) Exceptions to subparts SS and WW of this part 63.

(1) If you conduct a performance test or design evaluation for a control device used to control emissions only from storage tanks, you must establish operating limits, conduct monitoring, and keep records using the same procedures as required in subpart SS of this part 63 for control devices used to reduce emissions from process vents instead of the procedures specified in §§63.985(c), 63.998(d)(2)(i), and 63.999(b)(2).

(2) When the term “storage vessel” is used in subparts SS and WW of this part 63, the term “storage tank,” as defined in §63.2550 applies for the purposes of this subpart.

(d) Planned routine maintenance. The emission limits in Table 4 to this subpart for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. Periods of planned routine maintenance of each control device, during which the control device does not meet the emission limit specified in Table 4 to this subpart, must not exceed 240 hours per year (hr/yr). You may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded.

(e) Vapor balancing alternative. As an alternative to the emission limits specified in Table 4 to this subpart, you may elect to implement vapor balancing in accordance with §63.1253(f), except as specified in paragraphs (e)(1) through (3) of this section.

(1) When §63.1253(f)(6)(i) refers to a 90 percent reduction, 95 percent applies for the purposes of this subpart.

(2) To comply with §63.1253(f)(6)(i), the owner or operator of an offsite cleaning or reloading facility must comply with §§63.2445 through 63.2550 instead of complying with §63.1253(f)(7)(ii), except as specified in paragraph (e)(2)(i) or (ii) of this section.

(i) The reporting requirements in §63.2520 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(ii) As an alternative to complying with the monitoring, recordkeeping, and reporting provisions in §§63.2445 through 63.2550, the owner or operator of an offsite cleaning or reloading facility may comply as specified in §63.2535(a)(2) with any other subpart of this part 63 which has monitoring, recordkeeping, and reporting provisions as specified in §63.2535(a)(2).

(3) You may elect to set a pressure relief device to a value less than the 2.5 pounds per square inch gage pressure (psig) required in §63.1253(f)(5) if you provide rationale in your notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times.

(4) You may comply with the vapor balancing alternative in §63.1253(f) when your storage tank is filled from a barge. All requirements for tank trucks and railcars specified in §63.1253(f) also apply to barges, except as specified in §63.2470(e)(4)(i).

(i) When §63.1253(f)(2) refers to pressure testing certifications, the requirements in 40 CFR 61.304(f) apply for barges.

(ii) [Reserved]

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40335, July 14, 2006]

§ 63.2475 What requirements must I meet for transfer racks?

(a) You must comply with each emission limit and work practice standard in table 5 to this subpart that applies to your transfer racks, and you must meet each applicable requirement in paragraphs (b) and (c) of this section.

(b) When the term “high throughput transfer rack” is used in subpart SS of this part 63, the term “Group 1 transfer rack,” as defined in §63.2550, applies for the purposes of this subpart.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40335, July 14, 2006]

§ 63.2480 What requirements must I meet for equipment leaks?

(a) You must meet each requirement in table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section.

(b) If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.

(1) The requirements for pressure testing in §63.179(b) or §63.1036(b) may be applied to all processes, not just batch processes.

(2) For the purposes of this subpart, pressure testing for leaks in accordance with §63.179(b) or §63.1036(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

(3) For an existing source, you are not required to develop an initial list of identification numbers for connectors as would otherwise be required under §63.1022(b)(1) or §63.181(b)(1)(i).

(4) For connectors in gas/vapor and light liquid service at an existing source, you may elect to comply with the requirements in §63.169 or §63.1029 for connectors in heavy liquid service, including all associated recordkeeping and reporting requirements, rather than the requirements of §63.174 or §63.1027.

(5) For pumps in light liquid service in an MCPU that has no continuous process vents and is part of an existing source, you may elect to consider the leak definition that defines a leak to be 10,000 parts per million (ppm) or greater as an alternative to the values specified in §63.1026(b)(2)(i) through (iii) or §63.163(b)(2).

(c) If you comply with 40 CFR part 65, subpart F, you may elect to comply with the provisions in paragraphs (c)(1) through (9) of this section as an alternative to the referenced provisions in 40 CFR part 65, subpart F.

(1) The requirements for pressure testing in §65.117(b) may be applied to all processes, not just batch processes.

(2) For the purposes of this subpart, pressure testing for leaks in accordance with §65.117(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

(3) For an existing source, you are not required to develop an initial list of identification numbers for connectors as would otherwise be required under §65.103(b)(1).

(4) You may elect to comply with the monitoring and repair requirements specified in §65.108(e)(3) as an alternative to the requirements specified in §65.108(a) through (d) for any connectors at your affected source.

(5) For pumps in light liquid service in an MCPU that has no continuous process vents and is part of an existing source, you may elect to consider the leak definition that defines a leak to be 10,000 ppm or greater as an alternative to the values specified in §65.107(b)(2)(i) through (iii).

(6) When 40 CFR part 65, subpart F refers to the implementation date specified in §65.1(f), it means the compliance date specified in §63.2445.

(7) When §§65.105(f) and 65.117(d)(3) refer to §65.4, it means §63.2525.

(8) When §65.120(a) refers to §65.5(d), it means §63.2515.

(9) When §65.120(b) refers to §65.5(e), it means §63.2520.

(d) The provisions of this section do not apply to bench-scale processes, regardless of whether the processes are located at the same plant site as a process subject to the provisions of this subpart.

[71 FR 40335, July 14, 2006]

§ 63.2485 What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?

(a) You must meet each requirement in table 7 to this subpart that applies to your wastewater streams and liquid streams in open systems within an MCPU, except as specified in paragraphs (b) through (o) of this section.

(b) Wastewater HAP. Where §63.105 and §§63.132 through 63.148 refer to compounds in table 9 of subpart G of this part 63, the compounds in tables 8 and 9 to this subpart apply for the purposes of this subpart.

(c) Group 1 wastewater. Section 63.132(c)(1) (i) and (ii) do not apply. For the purposes of this subpart, a process wastewater stream is Group 1 for compounds in tables 8 and 9 to this subpart if any of the conditions specified in paragraphs (c) (1) through (3) of this section are met.

(1) The total annual average concentration of compounds in table 8 to this subpart is greater than or equal to 10,000 ppmw at any flowrate, and the total annual load of compounds in table 8 to this subpart is greater than or equal to 200 lb/yr.

(2) The total annual average concentration of compounds in table 8 to this subpart is greater than or equal to 1,000 ppmw, and the annual average flowrate is greater than or equal to 1 l/min.

(3) The combined total annual average concentration of compounds in tables 8 and 9 to this subpart is greater than or equal to 30,000 ppmw, and the combined total annual load of compounds in tables 8 and 9 to this subpart is greater than or equal to 1 tpy.

(d) Wastewater tank requirements.

(1) When §§63.133 and 63.147 reference floating roof requirements in §§63.119 and 63.120, the corresponding requirements in subpart WW of this part 63 may be applied for the purposes of this subpart.

(2) When §63.133(a) refers to table 10 of subpart G of this part 63, the maximum true vapor pressure in the table shall be limited to the HAP listed in tables 8 and 9 of this subpart FFFF.

(3) For the purposes of this subpart, the requirements of §63.133(a)(2) are satisfied by operating and maintaining a fixed roof if you demonstrate that the total soluble and partially soluble HAP emissions from the wastewater tank are no more than 5 percent higher than the emissions would be if the contents of the wastewater tank were not heated, treated by an exothermic reaction, or sparged.

(4) The emission limits specified in §§63.133(b)(2) and 63.139 for control devices used to control emissions from wastewater tanks do not apply during periods of planned routine maintenance of the control device(s) of no more than 240 hr/yr. You may request an extension to a total of 360 hr/yr in accordance with the procedures specified in §63.2470(d).

(e) Individual drain systems. The provisions of §63.136(e)(3) apply except as specified in paragraph (e)(1) of this section.

(1) A sewer line connected to drains that are in compliance with §63.136(e)(1) may be vented to the atmosphere, provided that the sewer line entrance to the first downstream junction box is water sealed and the sewer line vent pipe is designed as specified in §63.136(e)(2)(ii)(A).

(2) [Reserved]

(f) Closed-vent system requirements. When §63.148(k) refers to closed vent systems that are subject to the requirements of §63.172, the requirements of either §63.172 or §63.1034 apply for the purposes of this subpart.

(g) Halogenated vent stream requirements. For each halogenated vent stream from a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream that is vented through a closed-vent system to a combustion device to reduce organic HAP emissions, you must meet the same emission limits as specified for batch process vents in item 2 of table 2 to this subpart.

(h) Alternative test methods.

(1) As an alternative to the test methods specified in §63.144(b)(5)(i), you may use Method 8260 or 8270 as specified in §63.1257(b)(10)(iii).

(2) As an alternative to using the methods specified in §63.144(b)(5)(i), you may conduct wastewater analyses using Method 1666 or 1671 of 40 CFR part 136 and comply with the sampling protocol requirements specified in §63.144(b)(5)(ii). The validation requirements specified in §63.144(b)(5)(iii) do not apply if you use Method 1666 or 1671 of 40 CFR part 136.

(3) As an alternative to using Method 18 of 40 CFR part 60, as specified in §§63.139(c)(1)(ii) and 63.145(i)(2), you may elect to use Method 25A of 40 CFR part 60 as specified in §63.997.

(i) Offsite management and treatment option.

(1) If you ship wastewater to an offsite treatment facility that meets the requirements of §63.138(h), you may elect to document in your notification of compliance status report that the wastewater will be treated as hazardous waste at a facility that meets the requirements of §63.138(h) as an alternative to having the offsite facility submit the certification specified in §63.132(g)(2).

(2) As an alternative to the management and treatment options specified in §63.132(g)(2), any affected wastewater stream (or residual removed from an affected wastewater stream) with a total annual average concentration of compounds in Table 8 to this subpart less than 50 ppmw may be transferred offsite in accordance with paragraphs (i)(2) (i) and (ii) of this section.

(i) The transferee (or you) must demonstrate that less than 5 percent of the HAP in Table 9 to this subpart is emitted from the waste management units up to the activated sludge unit.

(ii) The transferee must treat the wastewater stream or residual in a biological treatment unit in accordance with §§63.138 and 63.145 and the requirements referenced therein.

(j) You must determine the annual average concentration and annual average flowrate for wastewater streams for each MCPU. The procedures for flexible operation units specified in §63.144 (b) and (c) do not apply for

the purposes of this subpart.

(k) The requirement to correct outlet concentrations from combustion devices to 3 percent oxygen in §§63.139(c)(1)(ii) and 63.146(i)(6) applies only if supplemental gases are combined with a vent stream from a Group 1 wastewater stream. If emissions are controlled with a vapor recovery system as specified in §63.139(c)(2), you must correct for supplemental gases as specified in §63.2460(c)(6).

(l) Requirements for liquid streams in open systems.

(1) References in §63.149 to §63.100(b) mean §63.2435(b) for the purposes of this subpart.

(2) When §63.149(e) refers to 40 CFR 63.100(l) (1) or (2), §63.2445(a) applies for the purposes of this subpart.

(3) When §63.149 uses the term “chemical manufacturing process unit,” the term “MCPU” applies for the purposes of this subpart.

(4) When §63.149(e)(1) refers to characteristics of water that contain compounds in Table 9 to 40 CFR part 63, subpart G, the characteristics specified in paragraphs (c) (1) through (3) of this section apply for the purposes of this subpart.

(5) When §63.149(e)(2) refers to characteristics of water that contain compounds in Table 9 to 40 CFR part 63, subpart G, the characteristics specified in paragraph (c)(2) of this section apply for the purposes of this subpart.

(m) When §63.132(f) refers to “a concentration of greater than 10,000 ppmw of table 9 compounds,” the phrase “a concentration of greater than 30,000 ppmw of total partially soluble HAP (PSHAP) and soluble HAP (SHAP) or greater than 10,000 ppmw of PSHAP” shall apply for the purposes of this subpart.

(n) Alternative requirements for wastewater that is Group 1 for soluble HAP only. The option specified in this paragraph (n) applies to wastewater that is Group 1 for soluble HAP in accordance with paragraph (c)(3) of this section and is discharged to biological treatment. Except as provided in paragraph (n)(4) of this section, this option does not apply to wastewater that is Group 1 for partially soluble HAP in accordance with paragraph (c)(1), (c)(2), or (c)(4) of this section. For wastewater that is Group 1 for SHAP, you need not comply with §§63.133 through 63.137 for any equalization unit, neutralization unit, and/or clarifier prior to the activated sludge unit, and you need not comply with the venting requirements in §63.136(e)(2)(ii)(A) for lift stations with a volume larger than 10,000 gal, provided you comply with the requirements specified in paragraphs (n)(1) through (3) of this section and all otherwise applicable requirements specified in table 7 to this subpart. For this option, the treatment requirements in §63.138 and the performance testing requirements in §63.145 do not apply to the biological treatment unit, except as specified in paragraphs (n)(2)(i) through (iv) of this section.

(1) Wastewater must be hard-piped between the equalization unit, clarifier, and activated sludge unit. This requirement does not apply to the transfer between any of these types of units that are part of the same structure and one unit overflows into the next.

(2) Calculate the destruction efficiency of the biological treatment unit using Equation 1 of this section in accordance with the procedures described in paragraphs (n)(2)(i) through (vi) of this section. You have demonstrated initial compliance if E is greater than or equal to 90 percent.

$$E = \frac{\left(QMW_a - QMG_e - QMG_n - QMG_c\right)\left(F_{bio}\right)}{QMW_a} \times 100 \qquad \text{(Eq.1)}$$

Where:

E	=	destruction efficiency of total PSHAP and SHAP for the biological treatment unit including the equalization unit, neutralization unit, and/or clarifier, percent;
QMW_a	=	mass flow rate of total PSHAP and SHAP compounds entering the equalization unit (or whichever of the three types of units is first), kilograms per hour (kg/hr);
QMG_e	=	mass flow rate of total PSHAP and SHAP compounds emitted from the equalization unit, kg/hr;
QMG_n	=	mass flow rate of total PSHAP and SHAP compounds emitted from the neutralization unit, kg/hr;
QMG_c	=	mass flow rate of total PSHAP and SHAP compounds emitted from the clarifier, kg/hr
F_{bio}	=	site-specific fraction of PSHAP and SHAP compounds biodegraded in the biological treatment unit.

(i) Include all PSHAP and SHAP compounds in both Group 1 and Group 2 wastewater streams from all MCPU, except you may exclude any compounds that meet the criteria specified in §63.145(a)(6)(ii) or (iii).

(ii) Conduct the demonstration under representative process unit and treatment unit operating conditions in accordance with §63.145(a)(3) and (4).

(iii) Determine PSHAP and SHAP concentrations and the total wastewater flow rate at the inlet to the equalization unit in accordance with §63.145(f)(1) and (2). References in §63.145(f)(1) and (2) to required mass removal and actual mass removal do not apply for the purposes of this section.

(iv) Determine F_{bio} for the activated sludge unit as specified in §63.145(h), except as specified in paragraph (n)(2)(iv)(A) or paragraph (n)(2)(iv)(B) of this section.

(A) If the biological treatment process meets both of the requirements specified in §63.145(h)(1)(i) and (ii), you may elect to replace the F_{bio} term in Equation 1 of this section with the numeral "1."

(B) You may elect to assume f_{bio} is zero for any compounds on List 2 of table 36 in subpart G.

(v) Determine QMG_e, QMG_n, and QMG_c using EPA's WATER9 model or the most recent update to this model, and conduct testing or use other procedures to validate the modeling results.

(vi) Submit the data and results of your demonstration, including both a description of and the results of your WATER9 modeling validation procedures, in your notification of compliance status report as specified in §63.2520(d)(2)(ii).

(3) As an alternative to the venting requirements in §63.136(e)(2)(ii)(A), a lift station with a volume larger than 10,000 gal may have openings necessary for proper venting of the lift station. The size and other design characteristics of these openings may be established based on manufacturer recommendations or engineering judgment for venting under normal operating conditions. You must describe the design of such openings and your supporting calculations and other rationale in your notification of compliance status report.

(4) For any wastewater streams that are Group 1 for both PSHAP and SHAP, you may elect to meet the requirements specified in table 7 to this subpart for the PSHAP and then comply with paragraphs (n)(1) through (3) of this section for the SHAP in the wastewater system. You may determine the SHAP mass removal rate, in kg/hr, in treatment units that are used to meet the requirements for PSHAP and add this amount to both the numerator and denominator in Equation 1 of this section.

(o) Compliance records. For each CPMS used to monitor a nonflare control device for wastewater emissions, you must keep records as specified in §63.998(c)(1) in addition to the records required in §63.147(d).

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40335, July 14, 2006]

§ 63.2490 What requirements must I meet for heat exchange systems?

(a) You must comply with each requirement in Table 10 to this subpart that applies to your heat exchange systems, except as specified in paragraphs (b) and (c) of this section.

(b) The phrase "a chemical manufacturing process unit meeting the conditions of §63.100 (b)(1) through (b)(3) of this section" in §63.104(a) means "an MCPU meeting the conditions of §63.2435" for the purposes of this subpart.

(c) The reference to §63.100(c) in §63.104(a) does not apply for the purposes of this subpart.

Alternative Means of Compliance

§ 63.2495 How do I comply with the pollution prevention standard?

(a) You may elect to comply with the pollution prevention alternative requirements specified in paragraphs (a)

(1) and (2) of this section in lieu of the emission limitations and work practice standards contained in Tables 1 through 7 to this subpart for any MCPU for which initial startup occurred before April 4, 2002.

(1) You must reduce the production-indexed HAP consumption factor (HAP factor) by at least 65 percent from a 3-year average baseline beginning no earlier than the 1994 through 1996 calendar years. For any reduction in the HAP factor that you achieve by reducing HAP that are also volatile organic compounds (VOC), you must demonstrate an equivalent reduction in the production-indexed VOC consumption factor (VOC factor) on a mass basis. For any reduction in the HAP factor that you achieve by reducing a HAP that is not a VOC, you may not increase the VOC factor.

(2) Any MCPU for which you seek to comply by using the pollution prevention alternative must begin with the same starting material(s) and end with the same product(s). You may not comply by eliminating any steps of a process by transferring the step offsite (to another manufacturing location). You may also not merge a solvent recovery step conducted offsite to onsite and as part of an existing process as a method of reducing consumption.

(3) You may comply with the requirements of paragraph (a)(1) of this section for a series of processes, including situations where multiple processes are merged, if you demonstrate to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes.

(b) Exclusions.

(1) You must comply with the emission limitations and work practice standards contained in tables 1 through 7 of this subpart for all HAP that are generated in the MCPU and that are not included in consumption, as defined in §63.2550. If any vent stream routed to the combustion control is a halogenated vent stream, as defined in §63.2550, then hydrogen halides that are generated as a result of combustion control must be controlled according to the requirements of §63.994 and the requirements referenced therein.

(2) You may not merge nondedicated formulation or nondedicated solvent recovery processes with any other processes.

(c) Initial compliance procedures. To demonstrate initial compliance with paragraph (a) of this section, you must prepare a demonstration summary in accordance with paragraph (c) (1) of this section and calculate baseline and target annual HAP and VOC factors in accordance with paragraphs (c) (2) and (3) of this section.

(1) Demonstration plan. You must prepare a pollution prevention demonstration plan that contains, at a minimum, the information in paragraphs (c)(1) (i) through (iii) of this section for each MCPU for which you comply with paragraph (a) of this section.

(i) Descriptions of the methodologies and forms used to measure and record consumption of HAP and VOC compounds.

(ii) Descriptions of the methodologies and forms used to measure and record production of the product(s).

(iii) Supporting documentation for the descriptions provided in accordance with paragraphs (c)(1) (i) and (ii) of this section including, but not limited to, samples of operator log sheets and daily, monthly, and/or annual inventories of materials and products. You must describe how this documentation will be used to calculate the annual factors required in paragraph (d) of this section.

(2) Baseline factors. You must calculate baseline HAP and VOC factors by dividing the consumption of total HAP and total VOC by the production rate, per process, for the first 3-year period in which the process was operational, beginning no earlier than the period consisting of the 1994 through 1996 calendar years.

(3) Target annual factors. You must calculate target annual HAP and VOC factors. The target annual HAP factor must be equal to 35 percent of the baseline HAP factor. The target annual VOC factor must be lower than the baseline VOC factor by an amount equivalent to the reduction in any HAP that is also a VOC, on a mass basis. The target annual VOC factor may be the same as the baseline VOC factor if the only HAP you reduce is not a VOC.

(d) Continuous compliance requirements. You must calculate annual rolling average values of the HAP and VOC factors (annual factors) in accordance with the procedures specified in paragraphs (d) (1) through (3) of this section. To show continuous compliance, the annual factors must be equal to or less than the target annual factors calculated according to paragraph (c)(3) of this section.

(1) To calculate the annual factors, you must divide the consumption of both total HAP and total VOC by the production rate, per process, for 12-month periods at the frequency specified in either paragraph (d) (2) or (3) of this section, as applicable.

(2) For continuous processes, you must calculate the annual factors every 30 days for the 12-month period preceding the 30th day (i.e., annual rolling average calculated every 30 days). A process with both batch and continuous operations is considered a continuous process for the purposes of this section.

(3) For batch processes, you must calculate the annual factors every 10 batches for the 12-month period preceding the 10th batch (i.e., annual rolling average calculated every 10 batches), except as specified in paragraphs (d)(3) (i) and (ii) of this section.

(i) If you produce more than 10 batches during a month, you must calculate the annual factors at least once during that month.

(ii) If you produce less than 10 batches in a 12-month period, you must calculate the annual factors for the number of batches in the 12-month period since the previous calculations.

(e) Records. You must keep records of HAP and VOC consumption, production, and the rolling annual HAP and VOC factors for each MCPU for which you are complying with paragraph (a) of this section.

(f) Reporting.

(1) You must include the pollution prevention demonstration plan in the precompliance report required by §63.2520(c).

(2) You must identify all days when the annual factors were above the target factors in the compliance reports.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40336, July 14, 2006]

§ 63.2500 How do I comply with emissions averaging?

(a) For an existing source, you may elect to comply with the percent reduction emission limitations in Tables 1, 2, 4, 5, and 7 to this subpart by complying with the emissions averaging provisions specified in §63.150, except as specified in paragraphs (b) through (f) of this section.

(b) The batch process vents in an MCPU collectively are considered one individual emission point for the purposes of emissions averaging, except that only individual batch process vents must be excluded to meet the requirements of §63.150(d)(5).

(c) References in §63.150 to §§63.112 through 63.130 mean the corresponding requirements in §§63.2450 through 63.2490, including applicable monitoring, recordkeeping, and reporting.

(d) References to “periodic reports” in §63.150 mean “compliance report” for the purposes of this subpart.

(e) For batch process vents, estimate uncontrolled emissions for a standard batch using the procedures in §63.1257(d)(2)(i) and (ii) instead of the procedures in §63.150(g)(2). Multiply the calculated emissions per batch by the number of batches per month when calculating the monthly emissions for use in calculating debits and credits.

(f) References to “storage vessels” in §63.150 mean “storage tank” as defined in §63.2550 for the purposes of this subpart.

§ 63.2505 How do I comply with the alternative standard?

As an alternative to complying with the emission limits and work practice standards for process vents and storage tanks in Tables 1 through 4 to this subpart and the requirements in §§63.2455 through 63.2470, you may comply with the emission limits in paragraph (a) of this section and demonstrate compliance in accordance with the requirements in paragraph (b) of this section.

(a) Emission limits and work practice standards.

(1) You must route vent streams through a closed-vent system to a control device that reduces HAP emissions as specified in either paragraph (a)(1)(i) or (ii) of this section.

(i) If you use a combustion control device, it must reduce HAP emissions as specified in paragraphs (a)(1)(i)(A), (B), and (C) of this section.

(A) To an outlet TOC concentration of 20 parts per million by volume (ppmv) or less.

(B) To an outlet concentration of hydrogen halide and halogen HAP of 20 ppmv or less.

(C) As an alternative to paragraph (a)(1)(i)(B) of this section, if you control halogenated vent streams emitted from a combustion device followed by a scrubber, reduce the hydrogen halide and halogen HAP generated in the combustion device by greater than or equal to 95 percent by weight in the scrubber.

(ii) If you use a noncombustion control device(s), it must reduce HAP emissions to an outlet total organic HAP concentration of 50 ppmv or less, and an outlet concentration of hydrogen halide and halogen HAP of 50 ppmv or less.

(2) Any Group 1 process vents within a process that are not controlled according to this alternative standard must be controlled according to the emission limits in tables 1 through 3 to this subpart.

(b) Compliance requirements. To demonstrate compliance with paragraph (a) of this section, you must meet the requirements of §63.1258(b)(5) beginning no later than the initial compliance date specified in §63.2445, except as specified in paragraphs (b)(1) through (9) of this section.

(1) You must comply with the requirements in §63.983 and the requirements referenced therein for closed-vent systems.

(2) When §63.1258(b)(5)(i) refers to §§63.1253(d) and 63.1254(c), the requirements in paragraph (a) of this section apply for the purposes of this subpart FFFF.

(3) When §63.1258(b)(5)(i)(B) refers to “HCl,” it means “total hydrogen halide and halogen HAP” for the purposes of this subpart FFFF.

(4) When §63.1258(b)(5)(ii) refers to §63.1257(a)(3), it means §63.2450(j)(5) for the purposes of this subpart FFFF.

(5) You must submit the results of any determination of the target analytes of predominant HAP in the notification of compliance status report.

(6) If you elect to comply with the requirement to reduce hydrogen halide and halogen HAP by greater than or equal to 95 percent by weight in paragraph (a)(1)(i)(C) of this section, you must meet the requirements in paragraphs (b)(6)(i) and (ii) of this section.

(i) Demonstrate initial compliance with the 95 percent reduction by conducting a performance test and setting a site-specific operating limit(s) for the scrubber in accordance with §63.994 and the requirements referenced therein. You must submit the results of the initial compliance demonstration in the notification of compliance status report.

(ii) Install, operate, and maintain CPMS for the scrubber as specified in §§63.994(c) and 63.2450(k), instead of as specified in §63.1258(b)(5)(i)(C).

(7) If flow to the scrubber could be intermittent, you must install, calibrate, and operate a flow indicator as specified in §63.2460(c)(7).

(8) Use the operating day as the averaging period for CEMS data and scrubber parameter monitoring data.

(9) The requirements in paragraph (a) of this section do not apply to emissions from storage tanks during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr.

You may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr in accordance with the procedures specified in §63.2470(d). You must comply with the recordkeeping and reporting specified in §§63.998(d)(2)(ii) and 63.999(c)(4) for periods of planned routine maintenance.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005]

Notification, Reports, and Records

§ 63.2515 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) Initial notification.

(1) As specified in §63.9(b)(2), if you startup your affected source before November 10, 2003, you must submit an initial notification not later than 120 calendar days after November 10, 2003.

(2) As specified in §63.9(b)(3), if you startup your new affected source on or after November 10, 2003, you must submit an initial notification not later than 120 calendar days after you become subject to this subpart.

(c) Notification of performance test. If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in §63.7(b)(1). For any performance test required as part of the initial compliance procedures for batch process vents in table 2 to this subpart, you must also submit the test plan required by §63.7(c) and the emission profile with the notification of the performance test.

§ 63.2520 What reports must I submit and when?

(a) You must submit each report in Table 11 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.2445 and ending on June 30 or December 31, whichever date is the first date following the end of the first 6 months after the compliance date that is specified for your affected source in §63.2445.

(2) The first compliance report must be postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the first reporting period specified in paragraph (b)(1) of this section.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) Precompliance report. You must submit a precompliance report to request approval for any of the items in paragraphs (c)(1) through (7) of this section. We will either approve or disapprove the report within 90 days after we receive it. If we disapprove the report, you must still be in compliance with the emission limitations and work practice standards in this subpart by the compliance date. To change any of the information submitted in the report, you must notify us 60 days before the planned change is to be implemented.

(1) Requests for approval to set operating limits for parameters other than those specified in §§63.2455 through 63.2485 and referenced therein. Alternatively, you may make these requests

according to §63.8(f).

(2) Descriptions of daily or per batch demonstrations to verify that control devices subject to §63.2460(c)(5) are operating as designed.

(3) A description of the test conditions, data, calculations, and other information used to establish operating limits according to §63.2460(c)(3).

(4) Data and rationale used to support an engineering assessment to calculate uncontrolled emissions in accordance with §63.1257(d)(2)(ii). This requirement does not apply to calculations of hydrogen halide and halogen HAP emissions as specified in §63.2465(b), to determinations that the total HAP concentration is less than 50 ppmv, or if you use previous test data to establish the uncontrolled emissions.

(5) The pollution prevention demonstration plan required in §63.2495(c)(1), if you are complying with the pollution prevention alternative.

(6) Documentation of the practices that you will implement to minimize HAP emissions from streams that contain energetics and organic peroxides, and rationale for why meeting the emission limit specified in tables 1 through 7 to this subpart would create an undue safety hazard.

(7) For fabric filters that are monitored with bag leak detectors, an operation and maintenance plan that describes proper operation and maintenance procedures, and a corrective action plan that describes corrective actions to be taken, and the timing of those actions, when the PM concentration exceeds the set point and activates the alarm.

(d) Notification of compliance status report. You must submit a notification of compliance status report according to the schedule in paragraph (d)(1) of this section, and the notification of compliance status report must contain the information specified in paragraph (d)(2) of this section.

(1) You must submit the notification of compliance status report no later than 150 days after the applicable compliance date specified in §63.2445.

(2) The notification of compliance status report must include the information in paragraphs (d)(2)(i) through (ix) of this section.

(i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source.

(ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to §§63.2455 through 63.2485. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) All operating scenarios.

(v) Descriptions of worst-case operating and/or testing conditions for control devices.

(vi) Identification of parts of the affected source subject to overlapping requirements described in §63.2535 and the authority under which you will comply.

(vii) The information specified in §63.1039(a)(1) through (3) for each process subject to the work practice standards for equipment leaks in Table 6 to this subpart.

(viii) Identify storage tanks for which you are complying with the vapor balancing alternative in §63.2470(e).

(ix) Records as specified in §63.2535(l)(1) through (3) of process units used to create a PUG and calculations of the initial primary product of the PUG.

(e) Compliance report. The compliance report must contain the information specified in paragraphs (e)(1)

through (10) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) For each SSM during which excess emissions occur, the compliance report must include records that the procedures specified in your startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction.

(5) The compliance report must contain the information on deviations, as defined in §63.2550, according to paragraphs (e)(5)(i), (ii), (iii), and (iv) of this section.

(i) If there are no deviations from any emission limit, operating limit or work practice standard specified in this subpart, include a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(ii) For each deviation from an emission limit, operating limit, and work practice standard that occurs at an affected source where you are not using a continuous monitoring system (CMS) to comply with the emission limit or work practice standard in this subpart, you must include the information in paragraphs (e)(5)(ii)(A) through (C) of this section. This includes periods of SSM.

(A) The total operating time of the affected source during the reporting period.

(B) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(C) Operating logs of processes with batch vents from batch operations for the day(s) during which the deviation occurred, except operating logs are not required for deviations of the work practice standards for equipment leaks.

(iii) For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CMS to comply with an emission limit in this subpart, you must include the information in paragraphs (e)(5)(iii)(A) through (L) of this section. This includes periods of SSM.

(A) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(B) The date, time, and duration that each CEMS was out-of-control, including the information in §63.8(c)(8).

(C) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(D) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total operating time of the affected source during that reporting period.

(E) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(F) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the affected source during that reporting period.

(G) An identification of each HAP that is known to be in the emission stream.

(H) A brief description of the process units.

(I) A brief description of the CMS.

(J) The date of the latest CMS certification or audit.

(K) Operating logs of processes with batch vents from batch operations for each day(s) during which the deviation occurred.

(L) The operating day or operating block average values of monitored parameters for each day(s) during which the deviation occurred.

(iv) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive HAP is the only HAP and usage is less than 10,000 lb/yr, the total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, or total uncontrolled hydrogen halide and halogen HAP emissions from all batch process vents and continuous process vents in a process are less than 1,000 lb/yr, include the records associated with each calculation required by §63.2525(e) that exceeds an applicable HAP usage or emissions threshold.

(6) If you use a CEMS, and there were no periods during which it was out-of-control as specified in §63.8(c)(7), include a statement that there were no periods during which the CEMS was out-of-control during the reporting period.

(7) Include each new operating scenario which has been operated since the time period covered by the last compliance report and has not been submitted in the notification of compliance status report or a previous compliance report. For each new operating scenario, you must provide verification that the operating conditions for any associated control or treatment device have not been exceeded and that any required calculations and engineering analyses have been performed. For the purposes of this paragraph, a revised operating scenario for an existing process is considered to be a new operating scenario.

(8) Records of process units added to a PUG as specified in §63.2525(i)(4) and records of primary product redeterminations as specified in §63.2525(i)(5).

(9) Applicable records and information for periodic reports as specified in referenced subparts F, G, H, SS, UU, WW, and GGG of this part and subpart F of 40 CFR part 65.

(10) Notification of process change.

(i) Except as specified in paragraph (e)(10)(ii) of this section, whenever you make a process change, or change any of the information submitted in the notification of compliance status report or a previous compliance report, that is not within the scope of an existing operating scenario, you must document the change in your compliance report. A process change does not include moving within a range of conditions identified in the standard batch, and a nonstandard batch does not constitute a process change. The notification must include all of the information in paragraphs (e)(10)(i)(A) through (C) of this section.

(A) A description of the process change.

(B) Revisions to any of the information reported in the original notification of compliance status report under paragraph (d) of this section.

(C) Information required by the notification of compliance status report under paragraph (d) of this section for changes involving the addition of processes or equipment at the affected source.

(ii) You must submit a report 60 days before the scheduled implementation date of any of the changes identified in paragraph (e)(10)(ii)(A), (B), or (C) of this section.

(A) Any change to the information contained in the precompliance report.

(B) A change in the status of a control device from small to large.

(C) A change from Group 2 to Group 1 for any emission point except for batch process vents that meet the conditions specified in §63.2460(b)(6)(i).

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40336, July 14, 2006]

§ 63.2525 What records must I keep?

You must keep the records specified in paragraphs (a) through (k) of this section.

(a) Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.

(b) Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.

(1) A description of the process and the type of process equipment used.

(2) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in §63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.

(3) The applicable control requirements of this subpart, including the level of required control, and for vents, the level of control for each vent.

(4) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(5) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(6) The applicable monitoring requirements of this subpart and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

(7) Calculations and engineering analyses required to demonstrate compliance.

(8) For reporting purposes, a change to any of these elements not previously reported, except for paragraph (b)(5) of this section, constitutes a new operating scenario.

(c) A schedule or log of operating scenarios for processes with batch vents from batch operations updated each time a different operating scenario is put into effect.

(d) The information specified in paragraphs (d)(1) and (2) of this section for Group 1 batch process vents in compliance with a percent reduction emission limit in Table 2 to this subpart if some of the vents are controlled to less the percent reduction requirement.

(1) Records of whether each batch operated was considered a standard batch.

(2) The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch.

(e) The information specified in paragraph (e)(2), (3), or (4) of this section, as applicable, for each process with Group 2 batch process vents or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr. No records are required for situations described in paragraph (e)(1) of this section.

(1) No records are required if you documented in your notification of compliance status report that the MCPU meets any of the situations described in paragraph (e)(1)(i), (ii), or (iii) of this section.

(i) The MCPU does not process, use, or generate HAP.

(ii) You control the Group 2 batch process vents using a flare that meets the requirements of §63.987.

(iii) You control the Group 2 batch process vents using a control device for which your determination of worst case for initial compliance includes the contribution of all Group 2 batch process vents.

(2) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive organic HAP is the only HAP and usage is less than

10,000 lb/yr, as specified in §63.2460(b)(7), you must keep records of the amount of HAP material used, and calculate the daily rolling annual sum of the amount used no less frequently than monthly. If a record indicates usage exceeds 10,000 lb/yr, you must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and you must begin recordkeeping as specified in paragraph (e)(4) of this section. After 1 year, you may revert to recording only usage if the usage during the year is less than 10,000 lb.

(3) If you documented in your notification of compliance status report that total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, then you must keep records of the number of batches operated and calculate a daily rolling annual sum of batches operated no less frequently than monthly. If the number of batches operated results in organic HAP emissions that exceed 1,000 lb/yr, you must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and you must begin recordkeeping as specified in paragraph (e)(4) of this section. After 1 year, you may revert to recording only the number of batches if the number of batches operated during the year results in less than 1,000 lb of organic HAP emissions.

(4) If you meet none of the conditions specified in paragraphs (e)(1) through (3) of this section, you must keep records of the information specified in paragraphs (e)(4)(i) through (iv) of this section.

(i) A record of the day each batch was completed and/or the operating hours per day for continuous operations with hydrogen halide and halogen emissions.

(ii) A record of whether each batch operated was considered a standard batch.

(iii) The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch.

(iv) Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than monthly.

(f) A record of each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(s).

(g) Records of the results of each CPMS calibration check and the maintenance performed, as specified in §63.2450(k)(1).

(h) For each CEMS, you must keep records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(i) For each PUG, you must keep records specified in paragraphs (i)(1) through (5) of this section.

(1) Descriptions of the MCPU and other process units in the initial PUG required by §63.2535(l)(1)(v).

(2) Rationale for including each MCPU and other process unit in the initial PUG (i.e., identify the overlapping equipment between process units) required by §63.2535(l)(1)(v).

(3) Calculations used to determine the primary product for the initial PUG required by §63.2535(l)(2)(iv).

(4) Descriptions of process units added to the PUG after the creation date and rationale for including the additional process units in the PUG as required by §63.2535(l)(1)(v).

(5) The calculation of each primary product redetermination required by §63.2535(l)(2)(iv).

(j) In the SSMP required by §63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.

(k) For each bag leak detector used to monitor PM HAP emissions from a fabric filter, maintain records of any bag leak detection alarm, including the date and time, with a brief explanation of the cause of the alarm and the corrective action taken.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40337, July 14, 2006]

Other Requirements and Information

§ 63.2535 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

For any equipment, emission stream, or wastewater stream subject to the provisions of both this subpart and another rule, you may elect to comply only with the provisions as specified in paragraphs (a) through (l) of this section. You also must identify the subject equipment, emission stream, or wastewater stream, and the provisions with which you will comply, in your notification of compliance status report required by §63.2520(d).

(a) Compliance with other subparts of this part 63.

(1) If you have an MCPU that includes a batch process vent that also is part of a CMPU as defined in subparts F and G of this part 63, you must comply with the emission limits; operating limits; work practice standards; and the compliance, monitoring, reporting, and recordkeeping requirements for batch process vents in this subpart, and you must continue to comply with the requirements in subparts F, G, and H of this part 63 that are applicable to the CMPU and associated equipment.

(2) After the compliance dates specified in §63.2445, at an offsite reloading or cleaning facility subject to §63.1253(f), as referenced from §63.2470(e), compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 constitutes compliance with the monitoring, recordkeeping, and reporting provisions of §63.1253(f)(7)(ii) or §63.1253(f)(7)(iii). You must identify in your notification of compliance status report required by §63.2520(d) the subpart of this part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

(b) Compliance with 40 CFR parts 264 and 265, subparts AA, BB, and/or CC.

(1) After the compliance dates specified in §63.2445, if a control device that you use to comply with this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart AA, BB, or CC; or the monitoring and recordkeeping requirements in 40 CFR part 265, subpart AA, BB, or CC; and you comply with the periodic reporting requirements under 40 CFR part 264, subpart AA, BB, or CC that would apply to the device if your facility had final-permitted status, you may elect to comply either with the monitoring, recordkeeping, and reporting requirements of this subpart; or with the monitoring and recordkeeping requirements in 40 CFR part 264 or 265 and the reporting requirements in 40 CFR part 264, as described in this paragraph (b)(1), which constitute compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. If you elect to comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, you must report the information described in §63.2520(e).

(2) After the compliance dates specified in §63.2445, if you have an affected source with equipment that is also subject to 40 CFR part 264, subpart BB, or to 40 CFR part 265, subpart BB, then compliance with the recordkeeping and reporting requirements of 40 CFR parts 264 and/or 265 may be used to comply with the recordkeeping and reporting requirements of this subpart, to the extent that the requirements of 40 CFR parts 264 and/or 265 duplicate the requirements of this subpart.

(c) Compliance with 40 CFR part 60, subpart Kb and 40 CFR part 61, subpart Y. After the compliance dates specified in §63.2445, you are in compliance with the provisions of this subpart FFFF for any storage tank that is assigned to an MCPU and that is both controlled with a floating roof and in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y. You are in compliance with this subpart FFFF if you have a storage tank with a fixed roof, closed-vent system, and control device in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart FFFF. Alternatively, if a storage tank assigned to an MCPU is subject to control under 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, you may elect to comply only with the requirements for Group 1 storage tanks in this subpart FFFF.

(d) Compliance with subpart I, GGG, or MMM of this part 63. After the compliance dates specified in §63.2445, if you have an affected source with equipment subject to subpart I, GGG, or MMM of this part 63, you may elect to comply with the provisions of subpart H, GGG, or MMM of this part 63, respectively, for all such equipment.

(e) Compliance with subpart GGG of this part 63 for wastewater. After the compliance dates specified in §63.2445, if you have an affected source subject to this subpart and you have an affected source that generates wastewater streams that meet the applicability thresholds specified in §63.1256, you may elect to comply with the provisions of this subpart FFFF for all such wastewater streams.

(f) Compliance with subpart MMM of this part 63 for wastewater. After the compliance dates specified in §63.2445, if you have an affected source subject to this subpart, and you have an affected source that generates wastewater streams that meet the applicability thresholds specified in §63.1362(d), you may elect to comply with the provisions of this subpart FFFF for all such wastewater streams (except that the 99 percent reduction requirement for streams subject to §63.1362(d)(10) still applies).

(g) Compliance with other regulations for wastewater. After the compliance dates specified in §63.2445, if you have a Group 1 wastewater stream that is also subject to provisions in 40 CFR parts 260 through 272, you may elect to determine whether this subpart or 40 CFR parts 260 through 272 contain the more stringent control requirements (e.g., design, operation, and inspection requirements for waste management units; numerical treatment standards; etc.) and the more stringent testing, monitoring, recordkeeping, and reporting requirements. Compliance with provisions of 40 CFR parts 260 through 272 that are determined to be more stringent than the requirements of this subpart constitute compliance with this subpart. For example, provisions of 40 CFR parts 260 through 272 for treatment units that meet the conditions specified in §63.138(h) constitute compliance with this subpart. You must identify in the notification of compliance status report required by §63.2520(d) the information and procedures that you used to make any stringency determinations.

(h) Compliance with 40 CFR part 60, subpart DDD, III, NNN, or RRR. After the compliance dates specified in §63.2445, if you have an MCPU that contains equipment subject to the provisions of this subpart that are also subject to the provisions of 40 CFR part 60, subpart DDD, III, NNN, or RRR, you may elect to apply this subpart to all such equipment in the MCPU. If an MCPU subject to the provisions of this subpart has equipment to which this subpart does not apply but which is subject to a standard in 40 CFR part 60, subpart DDD, III, NNN, or RRR, you may elect to comply with the requirements for Group 1 process vents in this subpart for such equipment. If you elect any of these methods of compliance, you must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with this subpart, as if they were organic HAP. Compliance with the provisions of this subpart, in the manner described in this paragraph (h), will constitute compliance with 40 CFR part 60, subpart DDD, III, NNN, or RRR, as applicable.

(i) Compliance with 40 CFR part 61, subpart BB.

(1) After the compliance dates specified in §63.2445, a Group 1 transfer rack, as defined in §63.2550, that is also subject to the provisions of 40 CFR part 61, subpart BB, you are required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in §63.2445, a Group 2 transfer rack, as defined in §63.2550, that is also subject to the provisions of 40 CFR part 61, subpart BB, is required to comply with the provisions of either paragraph (l)(2)(i) or (ii) of this section.

(i) If the transfer rack is subject to the control requirements specified in §61.302 of 40 CFR part 61, subpart BB, then you may elect to comply with either the requirements of 40 CFR part 61, subpart BB, or the requirements for Group 1 transfer racks under this subpart FFFF.

(ii) If the transfer rack is subject only to reporting and recordkeeping requirements under 40 CFR part 61, subpart BB, then you are required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 transfer racks, and you are exempt from the reporting and recordkeeping requirements in 40 CFR part 61, subpart BB.

(j) Compliance with 40 CFR part 61, subpart FF. After the compliance date specified in §63.2445, for a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR 61.342(c) through (h), and is not exempt under 40 CFR 61.342(c)(2) or (3), you may elect to comply only with the requirements for Group 1 wastewater streams in this subpart FFFF. If a Group 2 wastewater stream is exempted from 40 CFR 61.342(c)(1) under 40 CFR 61.342(c)(2) or (3), then you are required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 wastewater streams, and you are exempt from the requirements in 40 CFR part 61, subpart FF.

(k) Compliance with 40 CFR part 60, subpart VV, and 40 CFR part 61, subpart V. After the compliance date specified in §63.2445, if you have an affected source with equipment that is also subject to the requirements

of 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, you may elect to apply this subpart to all such equipment. After the compliance date specified in §63.2445, if you have an affected source with equipment to which this subpart does not apply, but which is subject to the requirements of 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, you may elect to apply this subpart to all such equipment. If you elect either of these methods of compliance, you must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with this subpart, as if they were organic HAP. Compliance with the provisions of this subpart, in the manner described in this paragraph (k), will constitute compliance with 40 CFR part 60, subpart VV and 40 CFR part 61, subpart V, as applicable.

(l) Applicability of process units included in a process unit group. You may elect to develop and comply with the requirements for PUG in accordance with paragraphs (l)(1) through (3) of this section.

(1) Procedures to create process unit groups. Develop and document changes in a PUG in accordance with the procedures specified in paragraphs (l)(1)(i) through (v) of this section.

(i) Initially, identify an MCPU that is created from nondedicated equipment that will operate on or after November 10, 2003 and identify all processing equipment that is part of this MCPU, based on descriptions in operating scenarios.

(ii) Add to the group any other nondedicated MCPU and other nondedicated process units expected to be operated in the 5 years after the date specified in paragraph (l)(1)(i) of this section, provided they satisfy the criteria specified in paragraphs (l)(1)(ii)(A) through (C) of this section. Also identify all of the processing equipment used for each process unit based on information from operating scenarios and other applicable documentation.

(A) Each process unit that is added to a group must have some processing equipment that is also part of one or more process units in the group.

(B) No process unit may be part of more than one PUG.

(C) The processing equipment used to satisfy the requirement of paragraph (l)(1)(ii)(A) of this section may not be a storage tank or control device.

(iii) The initial PUG consists of all of the processing equipment for the process units identified in paragraphs (l)(1)(i) and (ii) of this section. As an alternative to the procedures specified in paragraphs (l)(1)(i) and (ii) of this section, you may use a PUG that was developed in accordance with §63.1360(h) as your initial PUG.

(iv) Add process units developed in the future in accordance with the conditions specified in paragraphs (l)(1)(ii)(A) and (B) of this section.

(v) Maintain records that describe the process units in the initial PUG, the procedure used to create the PUG, and subsequent changes to each PUG as specified in §63.2525(i). Submit the records in reports as specified in §63.2520(d)(2)(ix) and (e)(8).

(2) Determine primary product. You must determine the primary product of each PUG created in paragraph (l)(1) of this section according to the procedures specified in paragraphs (l)(2)(i) through (iv) of this section.

(i) The primary product is the type of product (e.g., organic chemicals subject to §63.2435(b)(1), pharmaceutical products subject to §63.1250, or pesticide active ingredients subject to §63.1360) expected to be produced for the greatest operating time in the 5-year period specified in paragraph (l)(1)(ii) of this section.

(ii) If the PUG produces multiple types of products equally based on operating time, then the primary product is the type of product with the greatest production on a mass basis over the 5-year period specified in paragraph (l)(1)(ii) of this section.

(iii) At a minimum, you must redetermine the primary product of the PUG following the procedure specified in paragraphs (l)(2)(i) and (ii) of this section every 5 years.

(iv) You must record the calculation of the initial primary product determination as specified in §63.2525(i)(3) and report the results in the notification of compliance status report as specified in §63.2520(d)(8)(ix). You must record the calculation of each redetermination of the primary product as specified in §63.2525(i)(5) and report the calculation in a compliance report submitted no later than the report covering the period for the end of the

5th year after cessation of production of the previous primary product, as specified in §63.2520(e)(8).

(3) Compliance requirements.

(i) If the primary product of the PUG is determined according to paragraph (l)(2) of this section to be material described in §63.2435(b)(1), then you must comply with this subpart for each MCPU in the PUG. You may also elect to comply with this subpart for all other process units in the PUG, which constitutes compliance with other part 63 rules.

(ii) If the primary product of the PUG is determined according to paragraph (l)(2) of this section to be material not described in §63.2435(b)(1), then you must comply with paragraph (l)(3)(ii)(A), (B), or (C) of this section, as applicable.

(A) If the primary product is subject to subpart GGG of this part 63, then comply with the requirements of subpart GGG for each MCPU in the PUG.

(B) If the primary product is subject to subpart MMM of this part 63, then comply with the requirements of subpart MMM for each MCPU in the PUG.

(C) If the primary product is subject to any subpart in this part 63 other than subpart GGG or subpart MMM, then comply with the requirements of this subpart for each MCPU in the PUG.

(iii) The requirements for new and reconstructed sources in the alternative subpart apply to all MCPU in the PUG if and only if the affected source under the alternative subpart meets the requirements for construction or reconstruction.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40337, July 14, 2006]

§ 63.2540 What parts of the General Provisions apply to me?

Table 12 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.2545 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency also has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (4) of this section are retained by the Administrator of U.S. EPA and are not delegated to the State, local, or tribal agency.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in §63.2450(a) under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§ 63.2550 What definitions apply to this subpart?

(a) For an affected source complying with the requirements in subpart SS of this part 63, the terms used in this subpart and in subpart SS of this part 63 have the meaning given them in §63.981, except as specified in §§63.2450(k)(2) and (m), 63.2470(c)(2), 63.2475(b), and paragraph (i) of this section.

(b) For an affected source complying with the requirements in 40 CFR part 65, subpart F, the terms used in this subpart and in 40 CFR part 65, subpart F have the meaning given to them in §65.2.

(c) For an affected source complying with the requirements in subpart UU of this part 63, the terms used in this subpart and in subpart UU of this part 63 have the meaning given them in §63.1020.

(d) For an affected source complying with the requirements in subpart WW of this part 63, the terms used in this subpart and subpart WW of this part 63 have the meaning given them in §63.1061, except as specified in §§63.2450(m), 63.2470(c)(2), and paragraph (i) of this section.

(e) For an affected source complying with the requirements in §§63.132 through 63.149, the terms used in this subpart and §§63.132 through 63.149 have the meaning given them in §§63.101 and 63.111, except as specified in §63.2450(m) and paragraph (i) of this section.

(f) For an affected source complying with the requirements in §§63.104 and 63.105, the terms used in this subpart and in §§63.104 and 63.105 of this subpart have the meaning given them in §63.101, except as specified in §§63.2450(m), 63.2490(b), and paragraph (i) of this section.

(g) For an affected source complying with requirements in §§63.1253, 63.1257, and 63.1258, the terms used in this subpart and in §§63.1253, 63.1257, and 63.1258 have the meaning given them in §63.1251, except as specified in §63.2450(m) and paragraph (i) of this section.

(h) For an affected source complying with the requirements in 40 CFR part 65, subpart F, the terms used in this subpart and in 40 CFR part 65, subpart F, have the meaning given them in 40 CFR 65.2.

(i) All other terms used in this subpart are defined in the Clean Air Act (CAA), in 40 CFR 63.2, and in this paragraph (i). If a term is defined in §63.2, §63.101, §63.111, §63.981, §63.1020, §63.1061, §63.1251, or §65.2 and in this paragraph (i), the definition in this paragraph (i) applies for the purposes of this subpart.

Ancillary activities means boilers and incinerators (not used to comply with the emission limits in Tables 1 through 7 to this subpart), chillers and refrigeration systems, and other equipment and activities that are not directly involved (i.e., they operate within a closed system and materials are not combined with process fluids) in the processing of raw materials or the manufacturing of a product or isolated intermediate.

Batch operation means a noncontinuous operation involving intermittent or discontinuous feed into equipment, and, in general, involves the emptying of the equipment after the operation ceases and prior to beginning a new operation. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation.

Batch process vent means a vent from a unit operation or vents from multiple unit operations within a process that are manifolded together into a common header, through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Examples of batch process vents include, but are not limited to, vents on condensers used for product recovery, reactors, filters, centrifuges, and process tanks. The following are not batch process vents for the purposes of this subpart:

(1) Continuous process vents;

(2) Bottoms receivers;

(3) Surge control vessels;

(4) Gaseous streams routed to a fuel gas system(s);

(5) Vents on storage tanks, wastewater emission sources, or pieces of equipment subject to the emission limits and work practice standards in Tables 4, 6, and 7 to this subpart;

(6) Drums, pails, and totes;

(7) Flexible elephant trunk systems that draw ambient air (i.e., the system is not ducted, piped, or otherwise connected to the unit operations) away from operators when vessels are opened; and

(8) Emission streams from emission episodes that are undiluted and uncontrolled containing less than 50 ppmv HAP are not part of any batch process vent. A vent from a unit operation, or a vent from multiple unit operations that are manifolded together, from which total uncontrolled HAP emissions are less than 200 lb/yr is not a batch process vent; emissions for all emission episodes associated with the unit operation(s) must be included in the determination of the total mass emitted. The HAP concentration or mass emission rate may be determined using any of the following: process knowledge that no HAP are present in the emission stream; an engineering assessment as discussed in §63.1257(d)(2)(ii), except that you do not need to demonstrate that the equations in §63.1257(d)(2)(i) do not apply, and the precompliance reporting requirements specified in

§63.1257(d)(2)(ii)(E) do not apply for the purposes of this demonstration; equations specified in §63.1257(d)(2)(i), as applicable; test data using Method 18 of 40 CFR part 60, appendix A; or any other test method that has been validated according to the procedures in Method 301 of appendix A of this part.

Biofilter means an enclosed control system such as a tank or series of tanks with a fixed roof that contact emissions with a solid media (such as bark) and use microbiological activity to transform organic pollutants in a process vent stream to innocuous compounds such as carbon dioxide, water, and inorganic salts. Wastewater treatment processes such as aeration lagoons or activated sludge systems are not considered to be biofilters.

Bottoms receiver means a tank that collects bottoms from continuous distillation before the stream is sent for storage or for further downstream processing.

Construction means the onsite fabrication, erection, or installation of an affected source or MCPU. Addition of new equipment to an MCPU subject to existing source standards does not constitute construction, but it may constitute reconstruction of the affected source or MCPU if it satisfies the definition of reconstruction in §63.2.

Consumption means the quantity of all HAP raw materials entering a process in excess of the theoretical amount used as reactant, assuming 100 percent stoichiometric conversion. The raw materials include reactants, solvents, and any other additives. If a HAP is generated in the process as well as added as a raw material, consumption includes the quantity generated in the process.

Continuous operation means any operation that is not a batch operation.

Continuous process vent means the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream has the characteristics specified in §63.107(b) through (h), or meets the criteria specified in §63.107(i), except:

(1) The reference in §63.107(e) to a chemical manufacturing process unit that meets the criteria of §63.100(b) means an MCPU that meets the criteria of §63.2435(b);

(2) The reference in §63.107(h)(4) to §63.113 means Table 1 to this subpart;

(3) The references in §63.107(h)(7) to §§63.119 and 63.126 mean tables 4 and 5 to this subpart; and

(4) For the purposes of §63.2455, all references to the characteristics of a process vent (e.g., flowrate, total HAP concentration, or TRE index value) mean the characteristics of the gas stream.

(5) The reference to “total organic HAP” in §63.107(d) means “total HAP” for the purposes of this subpart FFFF.

(6) The references to an “air oxidation reactor, distillation unit, or reactor” in §63.107 mean any continuous operation for the purposes of this subpart.

(7) A separate determination is required for the emissions from each MCPU, even if emission streams from two or more MCPU are combined prior to discharge to the atmosphere or to a control device.

Dedicated MCPU means an MCPU that consists of equipment that is used exclusively for one process, except that storage tanks assigned to the process according to the procedures in §63.2435(d) also may be shared by other processes.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Emission point means each continuous process vent, batch process vent, storage tank, transfer rack, and

wastewater stream.

Energetics means propellants, explosives, and pyrotechnics and include materials listed at 49 CFR 172.101 as Hazard Class I Hazardous Materials, Divisions 1.1 through 1.6.

Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic HAP service; and any control devices or systems used to comply with Table 6 to this subpart.

Excess emissions means emissions greater than those allowed by the emission limit.

Family of materials means a grouping of materials with the same basic composition or the same basic end use or functionality produced using the same basic feedstocks with essentially identical HAP emission profiles (primary constituent and relative magnitude on a pound per product basis) and manufacturing equipment configuration. Examples of families of materials include multiple grades of the same product or different variations of a product (e.g., blue, black, and red resins).

Group 1 batch process vent means each of the batch process vents in a process for which the collective uncontrolled organic HAP emissions from all of the batch process vents are greater than or equal to 10,000 lb/yr at an existing source or greater than or equal to 3,000 lb/yr at a new source.

Group 2 batch process vent means each batch process vent that does not meet the definition of Group 1 batch process vent.

Group 1 continuous process vent means a continuous process vent for which the flow rate is greater than or equal to 0.005 standard cubic meter per minute, and the total resource effectiveness index value, calculated according to §63.2455(b), is less than or equal to 1.9 at an existing source and less than or equal to 5.0 at a new source.

Group 2 continuous process vent means a continuous process vent that does not meet the definition of a Group 1 continuous process vent.

Group 1 storage tank means a storage tank with a capacity greater than or equal to 10,000 gal storing material that has a maximum true vapor pressure of total HAP greater than or equal to 6.9 kilopascals at an existing source or greater than or equal to 0.69 kilopascals at a new source.

Group 2 storage tank means a storage tank that does not meet the definition of a Group 1 storage tank.

Group 1 transfer rack means a transfer rack that loads more than 0.65 million liters/year of liquids that contain organic HAP with a rack-weighted average partial pressure, as defined in §63.111, greater than or equal to 1.5 pound per square inch absolute.

Group 2 transfer rack means a transfer rack that does not meet the definition of a Group 1 transfer rack.

Group 1 wastewater stream means a wastewater stream consisting of process wastewater at an existing or new source that meets the criteria for Group 1 status in §63.2485(c) for compounds in Tables 8 and 9 to this subpart and/or a wastewater stream consisting of process wastewater at a new source that meets the criteria for Group 1 status in §63.132(d) for compounds in Table 8 to subpart G of this part 63.

Group 2 wastewater stream means any process wastewater stream that does not meet the definition of a Group 1 wastewater stream.

Halogen atoms mean chlorine and fluorine.

Halogenated vent stream means a vent stream determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures presented in §63.115(d)(2)(v).

HAP metals means the metal portion of antimony compounds, arsenic compounds, beryllium compounds, cadmium compounds, chromium compounds, cobalt compounds, lead compounds, manganese compounds, mercury compounds, nickel compounds, and selenium compounds.

Hydrogen halide and halogen HAP means hydrogen chloride, hydrogen fluoride, and chlorine.

In organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP as determined according to the provisions of §63.180(d). The provisions of §63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service.

Isolated intermediate means a product of a process that is stored before subsequent processing. An isolated intermediate is usually a product of a chemical synthesis, fermentation, or biological extraction process. Storage of an isolated intermediate marks the end of a process. Storage occurs at any time the intermediate is placed in equipment used solely for storage. The storage equipment is part of the MCPU that produces the isolated intermediate and is not assigned as specified in §63.2435(d).

Large control device means a control device that controls total HAP emissions of greater than or equal to 10 tpy, before control.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the MCPU into an individual drain system in preparation for or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewater include descaling of heat exchanger tubing bundles, cleaning of distillation column traps, draining of pumps into an individual drain system, and draining of portions of the MCPU for repair. Wastewater from routine cleaning operations occurring as part of batch operations is not considered maintenance wastewater.

Maximum true vapor pressure has the meaning given in §63.111, except that it applies to all HAP rather than only organic HAP.

Miscellaneous organic chemical manufacturing process means all equipment which collectively function to produce a product or isolated intermediate that are materials described in §63.2435(b). For the purposes of this subpart, process includes any, all or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a product or isolated intermediate. A process is also defined by the following:

(1) Routine cleaning operations conducted as part of batch operations are considered part of the process;

(2) Each nondedicated solvent recovery operation is considered a single process;

(3) Each nondedicated formulation operation is considered a single process that is used to formulate numerous materials and/or products;

(4) Quality assurance/quality control laboratories are not considered part of any process; and

(5) Ancillary activities are not considered a process or part of any process.

(6) The end of a process that produces a solid material is either up to and including the dryer or extruder, or for a polymer production process without a dryer or extruder, it is up to and including the extruder, die plate, or solid-state reactor, except in two cases. If the dryer, extruder, die plate, or solid-state reactor is followed by an operation that is designed and operated to remove HAP solvent or residual HAP monomer from the solid, then the solvent removal operation is the last step in the process. If the dried solid is diluted or mixed with a HAP-based solvent, then the solvent removal operation is the last step in the process.

Nondedicated solvent recovery operation means a distillation unit or other purification equipment that receives used solvent from more than one MCPU.

Nonstandard batch means a batch process that is operated outside of the range of operating conditions that are documented in an existing operating scenario but is still a reasonably anticipated event. For example, a nonstandard batch occurs when additional processing or processing at different operating conditions must be conducted to produce a product that is normally produced under the conditions described by the standard batch. A nonstandard batch may be necessary as a result of a malfunction, but it is not itself a malfunction.

On-site or on site means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source or MCPU to which the records pertain, or storage in central files elsewhere at the major source.

Operating scenario means, for the purposes of reporting and recordkeeping, any specific operation of an MCPU as described by records specified in §63.2525(b).

Organic group means structures that contain primarily carbon, hydrogen, and oxygen atoms.

Organic peroxides means organic compounds containing the bivalent -o-o-structure which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

Point of determination means each point where process wastewater exits the MCPU or control device.

> **Note to definition for point of determination:** The regulation allows determination of the characteristics of a wastewater stream: At the point of determination; or downstream of the point of determination if corrections are made for changes in flow rate and annual average concentration of soluble HAP and partially soluble HAP compounds as determined according to procedures in §63.144 of subpart G in this part 63. Such changes include losses by air emissions; reduction of annual average concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or annual average concentration by treating or otherwise handling the wastewater stream to remove or destroy HAP.

Predominant HAP means as used in calibrating an analyzer, the single organic HAP that constitutes the largest percentage of the total organic HAP in the analyzed gas stream, by volume.

Process condenser means a condenser whose primary purpose is to recover material as an integral part of an MCPU. All condensers recovering condensate from an MCPU at or above the boiling point or all condensers in line prior to a vacuum source are considered process condensers. Typically, a primary condenser or condensers in series are considered to be integral to the MCPU if they are capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse or for sale for fuel value, use, or reuse. This definition does not apply to a condenser that is used to remove materials that would hinder performance of a downstream recovery device as follows:

(1) To remove water vapor that would cause icing in a downstream condenser, or

(2) To remove water vapor that would negatively affect the adsorption capacity of carbon in a downstream carbon adsorber, or

(3) To remove high molecular weight organic compounds or other organic compounds that would be difficult to remove during regeneration of a downstream carbon adsorber.

Process tank means a tank or vessel that is used within a process to collect material discharged from a feedstock storage tank or equipment within the process before the material is transferred to other equipment within the process or a product storage tank. A process tank has emissions that are related to the characteristics of the batch cycle, and it does not accumulate product over multiple batches. Surge control vessels and bottoms receivers are not process tanks.

Production-indexed HAP consumption factor (HAP factor) means the result of dividing the annual consumption of total HAP by the annual production rate, per process.

Production-indexed VOC consumption factor (VOC factor) means the result of dividing the annual consumption of total VOC by the annual production rate, per process.

Quaternary ammonium compounds means a type of organic nitrogen compound in which the molecular structure includes a central nitrogen atom joined to four organic groups as well as an acid radical of some sort.

Recovery device means an individual unit of equipment used for the purpose of recovering chemicals from process vent streams and from wastewater streams for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. For the purposes of meeting requirements in table 2 to this subpart, the recovery device must not be a process condenser and must recover chemicals to be reused in a process on site. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. To be a recovery device for a wastewater stream, a decanter and any other equipment based on the operating principle of gravity separation must receive only multi-phase liquid streams.

Responsible official means responsible official as defined in 40 CFR 70.2.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purposes of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or

another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

Shutdown means the cessation of operation of a continuous operation for any purpose. Shutdown also means the cessation of a batch operation, or any related individual piece of equipment required or used to comply with this subpart, if the steps taken to cease operation differ from those described in a standard batch or nonstandard batch. Shutdown also applies to emptying and degassing storage vessels. Shutdown does not apply to cessation of batch operations at the end of a campaign or between batches within a campaign when the steps taken are routine operations.

Small control device means a control device that controls total HAP emissions of less than 10 tpy, before control.

Standard batch means a batch process operated within a range of operating conditions that are documented in an operating scenario. Emissions from a standard batch are based on the operating conditions that result in highest emissions. The standard batch defines the uncontrolled and controlled emissions for each emission episode defined under the operating scenario.

Startup means the setting in operation of a continuous operation for any purpose; the first time a new or reconstructed batch operation begins production; for new equipment added, including equipment required or used to comply with this subpart, the first time the equipment is put into operation; or for the introduction of a new product/process, the first time the product or process is run in equipment. For batch operations, startup applies to the first time the equipment is put into operation at the start of a campaign to produce a product that has been produced in the past if the steps taken to begin production differ from those specified in a standard batch or nonstandard batch. Startup does not apply when the equipment is put into operation as part of a batch within a campaign when the steps taken are routine operations.

Storage tank means a tank or other vessel that is used to store liquids that contain organic HAP and/or hydrogen halide and halogen HAP and that has been assigned to an MCPU according to the procedures in §63.2435(d). The following are not considered storage tanks for the purposes of this subpart:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Vessels storing organic liquids that contain HAP only as impurities;

(4) Wastewater storage tanks;

(5) Bottoms receivers;

(6) Surge control vessels; and

(7) Process tanks.

Supplemental gases means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental gases. Air required to operate combustion device burner(s) is not considered supplemental gases.

Surge control vessel means feed drums, recycle drums, and intermediate vessels as part of any continuous operation. Surge control vessels are used within an MCPU when in-process storage, mixing, or management of flowrates or volumes is needed to introduce material into continuous operations.

Total organic compounds or (TOC) means the total gaseous organic compounds (minus methane and ethane) in a vent stream.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are assigned to an MCPU according to the procedures specified in §63.2435(d) and are used to fill tank trucks and/or rail cars with organic liquids that contain one or more of the organic HAP listed in section 112(b) of the CAA of this subpart. Transfer rack includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves.

Unit operation means those processing steps that occur within distinct equipment that are used, among other things, to prepare reactants, facilitate reactions, separate and purify products, and recycle materials. Equipment used for these purposes includes, but is not limited to, reactors, distillation columns, extraction columns, absorbers, decanters, dryers, condensers, and filtration equipment.

Waste management unit means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include wastewater tanks, air flotation units, surface impoundments, containers, oil-water or organic-water separators, individual drain systems, biological wastewater treatment units, waste incinerators, and organic removal devices such as steam and air stripper units, and thin film evaporation units. If such equipment is being operated as a recovery device, then it is part of a miscellaneous organic chemical manufacturing process and is not a waste management unit.

Wastewater means water that is discarded from an MCPU or control device through a POD and that contains either: an annual average concentration of compounds in tables 8 and 9 to this subpart of at least 5 ppmw and has an annual average flowrate of 0.02 liters per minute or greater; or an annual average concentration of compounds in tables 8 and 9 to this subpart of at least 10,000 ppmw at any flowrate. Wastewater means process wastewater or maintenance wastewater. The following are not considered wastewater for the purposes of this subpart:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems, including testing of such systems;

(3) Spills;

(4) Water from safety showers;

(5) Samples of a size not greater than reasonably necessary for the method of analysis that is used;

(6) Equipment leaks;

(7) Wastewater drips from procedures such as disconnecting hoses after cleaning lines; and

(8) Noncontact cooling water.

Wastewater stream means a stream that contains only wastewater as defined in this paragraph (i).

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40338, July 14, 2006]

Table 1 to Subpart FFFF of Part 63—
Emission Limits and Work Practice Standards for Continuous Process Vents

As required in §63.2455, you must meet each emission limit and work practice standard in the following table that applies to your continuous process vents:

For each . . .	For which . . .	Then you must . . .
1. Group 1 continuous process vent	a. Not applicable	i. Reduce emissions of total organic HAP by ≥ 98 percent by weight or to an outlet process concentration ≤ 20 ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
		ii. Reduce emissions of total organic HAP by venting emissions through a closed vent system to a flare; or
		iii. Use a recovery device to maintain the TRE above 1.9 for an existing source or above 5.0 for a new source.
2. Halogenated Group 1 continuous process vent stream	a. You use a combustion control device to control organic HAP emissions	i. Use a halogen reduction device after the combustion device to reduce emissions of hydrogen halide and halogen HAP by ≥ 99 percent by weight, or to ≤ 0.45 kg/hr, or to ≤ 20 ppmv; or ii. Use a halogen reduction device before the combustion device to reduce the halogen atom mass emission rate to ≤ 0.45 kg/hr or to a concentration ≤ 20 ppmv.
3. Group 2 continuous process vent at an existing source	You use a recovery device to maintain the TRE level >1.9 but ≤ 5.0	Comply with the requirements in §63.993 and the requirements referenced therein.
4. Group 2 continuous process vent at a new source	You use a recovery device to maintain the TRE level > 5.0 but ≤ 8.0	Comply with the requirements in §63.993 and the requirements referenced therein.

Table 2 to Subpart FFFF of Part 63—
Emission Limits and Work Practice Standards for Batch Process Vents

As required in §63.2460, you must meet each emission limit and work practice standard in the following table that applies to your batch process vents:

For each . . .	Then you must . . .	And you must . . .
1. Process with Group 1 batch process vents	a. Reduce collective uncontrolled organic HAP emissions from the sum of all batch process vents within the process by ≥ 98 percent by weight by venting emissions from a sufficient number of the vents through one or more closed-vent systems to any combination of control devices (except a flare); or	Not applicable.
	b. Reduce collective uncontrolled organic HAP emissions from the sum of all batch process vents within the process by ≥ 95 percent by weight by venting emissions from a sufficient number of the vents through one or more closed-vent systems to any combination of recovery devices or a biofilter, except you may elect to comply with the requirements of subpart WW of this part for any process tank; or	Not applicable.
	c. Reduce uncontrolled organic HAP emissions from one or more batch process vents within the process by venting through a closed-vent system to a flare or by venting through one or more closed-vent systems to any combination of control devices (excluding a flare) that reduce organic HAP to an outlet concentration ≤ 20 ppmv as TOC or total organic HAP.	For all other batch process vents within the process, reduce collective organic HAP emissions as specified in item 1.a and/or item 1.b of this table.
2. Halogenated Group 1 batch process vent for which you use a combustion device to control organic HAP emissions	a. Use a halogen reduction device after the combustion control device; or	i. Reduce overall emissions of hydrogen halide and halogen HAP by ≥ 99 percent; or ii. Reduce overall emissions of hydrogen halide and halogen HAP to ≤ 0.45 kg/hr; or iii. Reduce overall emissions of hydrogen halide and halogen HAP to a concentration ≤ 20 ppmv.
	b. Use a halogen reduction device before the combustion control device	Reduce the halogen atom mass emission rate to ≤ 0.45 kg/hr or to a concentration ≤ 20 ppmv.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40339, July 14, 2006]

Table 3 to Subpart FFFF of Part 63—
Emission Limits for Hydrogen Halide and Halogen HAP Emissions or HAP Metals Emissions From Process Vents

As required in §63.2465, you must meet each emission limit in the following table that applies to your process vents that contain hydrogen halide and halogen HAP emissions or PM HAP emissions:

For each . . .	You must . . .
1. Process with uncontrolled hydrogen halide and halogen HAP emissions from process vents ≥ 1,000 lb/yr	a. Reduce collective hydrogen halide and halogen HAP emissions by ≥ 99 percent by weight or to an outlet concentration ≤ 20 ppmv by venting through one or more closed-vent systems to any combination of control devices, or
	b. Reduce the halogen atom mass emission rate from the sum of all batch process vents and each individual continuous process vent to ≤ 0.45 kg/hr by venting through one or more closed-vent systems to a halogen reduction device.
2. Process at a new source with uncontrolled emissions from process vents ≥ 150 lb/yr of HAP metals	Reduce overall emissions of HAP metals by ≥ 97 percent by weight.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40340, July 14, 2006]

Table 4 to Subpart FFFF of Part 63—Emission Limits for Storage Tanks

As required in §63.2470, you must meet each emission limit in the following table that applies to your storage tanks:

For each . . .	For which . . .	Then you must . . .
1. Group 1 storage tank	a. The maximum true vapor pressure of total HAP at the storage temperature is ≥ 76.6 kilopascals	i. Reduce total HAP emissions by ≥ 95 percent by weight or to ≤ 20 ppmv of TOC or organic HAP and ≤ 20 ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or
		ii. Reduce total organic HAP emissions by venting emissions through a closed vent system to a flare; or
		iii. Reduce total HAP emissions by venting emissions to a fuel gas system or process in accordance with §63.982(d) and the requirements referenced therein.
	b. The maximum true vapor pressure of total HAP at the storage temperature is < 76.6 kilopascals	i. Comply with the requirements of subpart WW of this part, except as specified in §63.2470; or
		ii. Reduce total HAP emissions by ≥ 95 percent by weight or to ≤ 20 ppmv of TOC or organic HAP and ≤ 20 ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or
		iii. Reduce total organic HAP emissions by venting emissions through a closed vent system to a flare; or
		iv. Reduce total HAP emissions by venting emissions to a fuel gas system or process in accordance with §63.982(d) and the requirements referenced therein.
2. Halogenated vent stream from a Group 1 storage tank	You use a combustion control device to control organic HAP emissions	Meet one of the emission limit options specified in Item 2.a.i or ii. in Table 1 to this subpart.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40340, July 14, 2006]

Table 5 to Subpart FFFF of Part 63—
Emission Limits and Work Practice Standards for Transfer Racks

As required in §63.2475, you must meet each emission limit and work practice standard in the following table that applies to your transfer racks:

For each . . .	You must . . .
1. Group 1 transfer rack	a. Reduce emissions of total organic HAP by ≥ 98 percent by weight or to an outlet concentration ≤ 20 ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
	b. Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a flare; or
	c. Reduce emissions of total organic HAP by venting emissions to a fuel gas system or process in accordance with §63.982(d) and the requirements referenced therein; or
	d. Use a vapor balancing system designed and operated to collect organic HAP vapors displaced from tank trucks and railcars during loading and route the collected HAP vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected by a common header.
2. Halogenated Group 1 transfer rack vent stream for which you use a combustion device to control organic HAP emissions	a. Use a halogen reduction device after the combustion device to reduce emissions of hydrogen halide and halogen HAP by ≥ 99 percent by weight, to ≤ 0.45 kg/hr, or to ≤ 20 ppmv; or b. Use a halogen reduction device before the combustion device to reduce the halogen atom mass emission rate to ≤ 0.45 kg/hr or to a concentration ≤ 20 ppmv.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40341, July 14, 2006]

Table 6 to Subpart FFFF of Part 63—
Requirements for Equipment Leaks

As required in §63.2480, you must meet each requirement in the following table that applies to your equipment leaks:

For all . . .	And that is part of . . .	You must . . .
1. Equipment that is in organic HAP service	a. Comply with the requirements of subpart UU of this part 63 and the requirements referenced therein, except as specified in §63.2480(b) and (d); or	
	b. Comply with the requirements of subpart H of this part 63 and the requirements referenced therein, except as specified in §63.2480(b) and (d); or	
	c. Comply with the requirements of 40 CFR part 65, subpart F and the requirements referenced therein, except as specified in §63.2480(c) and (d).	
2. Equipment that is in organic HAP service at a new source	a. Any MCPU	i. Comply with the requirements of subpart UU of this part 63 and the requirements referenced therein; or ii. Comply with the requirements of 40 CFR part 65, subpart F.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40341, July 14, 2006]

Table 7 to Subpart FFFF of Part 63—
Requirements for Wastewater Streams and Liquid Streams in Open Systems Within an MCPU

As required in §63.2485, you must meet each requirement in the following table that applies to your wastewater streams and liquid streams in open systems within an MCPU:

For each . . .	You must . . .
1. Process wastewater stream	Comply with the requirements in §§63.132 through 63.148 and the requirements referenced therein, except as specified in §63.2485.
2. Maintenance wastewater stream	Comply with the requirements in §63.105 and the requirements referenced therein, except as specified in §63.2485.
3. Liquid streams in an open system within an MCPU	Comply with the requirements in §63.149 and the requirements referenced therein, except as specified in §63.2485.

Table 8 to Subpart FFFF of Part 63—Partially Soluble Hazardous Air Pollutants

As specified in §63.2485, the partially soluble HAP in wastewater that are subject to management and treatment requirements in this subpart FFFF are listed in the following table:

Chemical name . . .	CAS No.
1. 1,1,1–Trichloroethane (methyl chloroform)	71556
2. 1,1,2,2–Tetrachloroethane	79345
3. 1,1,2–Trichloroethane	79005
4. 1,1–Dichloroethylene (vinylidene chloride)	75354
5. 1,2–Dibromoethane	106934
6. 1,2–Dichloroethane (ethylene dichloride)	107062
7. 1,2–Dichloropropane	78875
8. 1,3–Dichloropropene	542756
9. 2,4,5–Trichlorophenol	95954
10. 1,4–Dichlorobenzene	106467
11. 2–Nitropropane	79469
12. 4–Methyl-2-pentanone (MIBK)	108101
13. Acetaldehyde	75070
14. Acrolein	107028
15. Acrylonitrile	107131
16. Allyl chloride	107051
17. Benzene	71432
18. Benzyl chloride	100447
19. Biphenyl	92524
20. Bromoform (tribromomethane)	75252
21. Bromomethane	74839
22. Butadiene	106990
23. Carbon disulfide	75150
24. Chlorobenzene	108907
25. Chloroethane (ethyl chloride)	75003
26. Chloroform	67663
27. Chloromethane	74873
28. Chloroprene	126998
29. Cumene	98828
30. Dichloroethyl ether	111444
31. Dinitrophenol	51285
32. Epichlorohydrin	106898

Chemical name . . .	CAS No.
33. Ethyl acrylate	140885
34. Ethylbenzene	100414
35. Ethylene oxide	75218
36. Ethylidene dichloride	75343
37. Hexachlorobenzene	118741
38. Hexachlorobutadiene	87683
39. Hexachloroethane	67721
40. Methyl methacrylate	80626
41. Methyl-t-butyl ether	1634044
42. Methylene chloride	75092
43. N-hexane	110543
44. N,N-dimethylaniline	121697
45. Naphthalene	91203
46. Phosgene	75445
47. Propionaldehyde	123386
48. Propylene oxide	75569
49. Styrene	100425
50. Tetrachloroethylene (perchloroethylene)	127184
51. Tetrachloromethane (carbon tetrachloride)	56235
52. Toluene	108883
53. Trichlorobenzene (1,2,4-)	120821
54. Trichloroethylene	79016
55. Trimethylpentane	540841
56. Vinyl acetate	108054
57. Vinyl chloride	75014
58. Xylene (m)	108383
59. Xylene (o)	95476
60. Xylene (p)	106423

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40341, July 14, 2006]

Table 9 to Subpart FFFF of Part 63—Soluble Hazardous Air Pollutants

As specified in §63.2485, the soluble HAP in wastewater that are subject to management and treatment requirements of this subpart FFFF are listed in the following table:

Chemical name . . .	CAS No.
1. Acetonitrile	75058
2. Acetophenone	98862

Chemical name . . .	CAS No.
3. Diethyl sulfate	64675
4. Dimethyl hydrazine (1,1)	57147
5. Dimethyl sulfate	77781
6. Dinitrotoluene (2,4)	121142
7. Dioxane (1,4)	123911
8. Ethylene glycol dimethyl ether	110714
9. Ethylene glycol monobutyl ether acetate	112072
10. Ethylene glycol monomethyl ether acetate	110496
11. Isophorone	78591
12. Methanol	67561
13. Nitrobenzene	98953
14. Toluidine (o-)	95534
15. Triethylamine	121448

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38561, July 1, 2005]

Table 10 to Subpart FFFF of Part 63—
Work Practice Standards for Heat Exchange Systems

As required in §63.2490, you must meet each requirement in the following table that applies to your heat exchange systems:

For each . . .	You must . . .
Heat exchange system, as defined in §63.101	Comply with the requirements of §63.104 and the requirements referenced therein, except as specified in §63.2490.

Table 11 to Subpart FFFF of Part 63—Requirements for Reports

As required in §63.2520(a) and (b), you must submit each report that applies to you on the schedule shown in the following table:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Precompliance report	The information specified in §63.2520(c)	At least 6 months prior to the compliance date; or for new sources, with the application for approval of construction or reconstruction.
2. Notification of compliance status report	The information specified in §63.2520(d)	No later than 150 days after the compliance date specified in §63.2445.
3. Compliance report	The information specified in §63.2520(e)	Semiannually according to the requirements in §63.2520(b).

Table 12 to Subpart FFFF of Part 63—Applicability of General Provisions to Subpart FFFF
As specified in §63.2540, the parts of the General Provisions that apply to you are shown in the following table:

Citation	Subject	Explanation
§63.1	Applicability	Yes.
§63.2	Definitions	Yes.
§63.3	Units and Abbreviations	Yes.
§63.4	Prohibited Activities	Yes.
§63.5	Construction/Reconstruction	Yes.
§63.6(a)	Applicability	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed sources	Yes.
§63.6(b)(5)	Notification	Yes.
§63.6(b)(6)	[Reserved]	
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Yes.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Yes.
§63.6(c)(3)–(4)	[Reserved]	
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Yes
§63.6(d)	[Reserved]	
§63.6(e)(1)–(2)	Operation & Maintenance	Yes.
§63.6(e)(3)(i), (ii), and (v) through (viii)	Startup, Shutdown, Malfunction Plan (SSMP)	Yes, except information regarding Group 2 emission points and equipment leaks is not required in the SSMP, as specified in §63.2525(j).
§63.6(e)(3)(iii) and (iv)	Recordkeeping and Reporting During SSM	No, §63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify the recordkeeping requirement for SSM events, and §63.2520(e)(4) specifies reporting requirements.
§63.6(e)(3)(ix)	SSMP incorporation into title V	Yes.

Citation	Subject	Explanation
	permit	
§63.6(f)(1)	Compliance Except During SSM	Yes.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Yes.
§63.6(h)	Opacity/Visible Emission (VE) Standards	Only for flares for which Method 22 observations are required as part of a flare compliance assessment.
§63.6(i)(1)–(14)	Compliance Extension	Yes.
§63.6(j)	Presidential Compliance Exemption	Yes.
§63.7(a)(1)–(2)	Performance Test Dates	Yes, except substitute 150 days for 180 days.
§63.7(a)(3)	Section 114 Authority	Yes, and this paragraph also applies to flare compliance assessments as specified under §63.997(b)(2).
§63.7(b)(1)	Notification of Performance Test	Yes.
§63.7(b)(2)	Notification of Rescheduling	Yes.
§63.7(c)	Quality Assurance/Test Plan	Yes, except the test plan must be submitted with the notification of the performance test if the control device controls batch process vents.
§63.7(d)	Testing Facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Yes, except that performance tests for batch process vents must be conducted under worst-case conditions as specified in §63.2460.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Yes.
§63.7(e)(3)	Test Run Duration	Yes.
§63.7(f)	Alternative Test Method	Yes.
§63.7(g)	Performance Test Data Analysis	Yes.
§63.7(h)	Waiver of Tests	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Yes.
§63.8(a)(2)	Performance Specifications	Yes.
§63.8(a)(3)	[Reserved]	
§63.8(a)(4)	Monitoring with Flares	Yes.
§63.8(b)(1)	Monitoring	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Yes.
§63.8(c)(1)(i)	Routine and Predictable SSM	Yes.
§63.8(c)(1)(ii)	SSM not in SSMP	Yes.

Citation	Subject	Explanation
§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Yes.
§63.8(c)(2)–(3)	Monitoring System Installation	Yes.
§63.8(c)(4)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subparts G and SS of part 63. Requirements for COMS do not apply because subpart FFFF does not require continuous opacity monitoring systems (COMS).
§63.8(c)(4)(i)	COMS Measurement and Recording Frequency	No; subpart FFFF does not require COMS.
§63.8(c)(4)(ii)	CEMS Measurement and Recording Frequency	Yes.
§63.8(c)(5)	COMS Minimum Procedures	No. Subpart FFFF does not contain opacity or VE limits.
§63.8(c)(6)	CMS Requirements	Only for CEMS; requirements for CPMS are specified in referenced subparts G and SS of this part 63. Requirements for COMS do not apply because subpart FFFF does not require COMS.
§63.8(c)(7)–(8)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subparts G and SS of part 63. Requirements for COMS do not apply because subpart FFFF does not require COMS.
§63.8(d)	CMS Quality Control	Only for CEMS.
§63.8(e)	CMS Performance Evaluation	Only for CEMS. Section 63.8(e)(5)(ii) does not apply because subpart FFFF does not require COMS.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Yes, except you may also request approval using the precompliance report.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Only applicable when using CEMS to demonstrate compliance, including the alternative standard in §63.2505.
§63.8(g)(1)–(4)	Data Reduction	Only when using CEMS, including for the alternative standard in §63.2505, except that the requirements for COMS do not apply because subpart FFFF has no opacity or VE limits, and §63.8(g)(2) does not apply because data reduction requirements for CEMS are specified in §63.2450(j).
§63.8(g)(5)	Data Reduction	No. Requirements for CEMS are specified in §63.2450(j). Requirements for CPMS are specified in referenced subparts G and SS of this part 63.
§63.9(a)	Notification Requirements	Yes.
§63.9(b)(1)–(5)	Initial Notifications	Yes.
§63.9(c)	Request for Compliance Extension	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	Yes.
§63.9(e)	Notification of Performance Test	Yes.
§63.9(f)	Notification of VE/Opacity Test	No. Subpart FFFF does not contain opacity or VE limits.
§63.9(g)	Additional Notifications When Using	Only for CEMS. Section 63.9(g)(2) does not apply

Citation	Subject	Explanation
	CMS	because subpart FFFF does not require COMS.
63.9(h)(1)–(6)	Notification of Compliance Status	Yes, except subpart FFFF has no opacity or VE limits, and 63.9(h)(2)(i)(A) through (G) and (ii) do not apply because 63.2520(d) specifies the required contents and due date of the notification of compliance status report.
§63.9(i)	Adjustment of Submittal Deadlines	Yes.
§63.9(j)	Change in Previous Information	No, §63.2520(e) specifies reporting requirements for process changes.
§63.10(a)	Recordkeeping/Reporting	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	Yes.
§63.10(b)(2)(i)–(ii), (iv), (v)	Records related to SSM	No, §§63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify recordkeeping requirements for periods of SSM.
§63.10(b)(2)(iii)	Records related to maintenance of air pollution control equipment	Yes.
§63.10(b)(2)(vi), (x), and (xi)	CMS Records	Only for CEMS; requirements for CPMS are specified in referenced subparts G and SS of this part 63.
§63.10(b)(2)(vii)–(ix)	Records	Yes.
§63.10(b)(2)(xii)	Records	Yes.
§63.10(b)(2)(xiii)	Records	Only for CEMS.
§63.10(b)(2)(xiv)	Records	Yes.
§63.10(b)(3)	Records	Yes.
§63.10(c)(1)–(6),(9)–(15)	Records	Only for CEMS. Recordkeeping requirements for CPMS are specified in referenced subparts G and SS of this part 63.
§63.10(c)(7)–(8)	Records	No. Recordkeeping requirements are specified in §63.2525.
§63.10(d)(1)	General Reporting Requirements	Yes.
§63.10(d)(2)	Report of Performance Test Results	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	No. Subpart FFFF does not contain opacity or VE limits.
§63.10(d)(4)	Progress Reports	Yes.
§63.10(d)(5)(i)	Periodic Startup, Shutdown, and Malfunction Reports	No, §63.2520(e)(4) and (5) specify the SSM reporting requirements.
§63.10(d)(5)(ii)	Immediate SSM Reports	No.
§63.10(e)(1)	Additional CEMS Reports	Yes.
§63.10(e)(2)(i)	Additional CMS Reports	Only for CEMS.
§63.10(e)(2)(ii)	Additional COMS Reports	No. Subpart FFFF does not require COMS.
§63.10(e)(3)	Reports	No. Reporting requirements are specified in §63.2520.
§63.10(e)(3)(i)–(iii)	Reports	No. Reporting requirements are specified in §63.2520.

Citation	Subject	Explanation
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	No. Reporting requirements are specified in §63.2520.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	No. Reporting requirements are specified in §63.2520.
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	No. Reporting requirements are specified in §63.2520.
§63.10(e)(4)	Reporting COMS data	No. Subpart FFFF does not contain opacity or VE limits.
§63.10(f)	Waiver for Recordkeeping/Reporting	Yes.
§63.11	Flares	Yes.
§63.12	Delegation	Yes.
§63.13	Addresses	Yes.
§63.14	Incorporation by Reference	Yes.
§63.15	Availability of Information	Yes.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38561, July 1, 2005; 71 FR 20463, Apr. 20, 2006; 71 FR 40341, July 14, 2006]

Section RR Subpart EEE—National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors

Source: 64 FR 53038, Sept. 30, 1999, unless otherwise noted.

General

§ 63.1200 Who is subject to these regulations?

The provisions of this subpart apply to all hazardous waste combustors: hazardous waste incinerators, hazardous waste cement kilns, hazardous waste lightweight aggregate kilns, hazardous waste solid fuel boilers, hazardous waste liquid fuel boilers, and hazardous waste hydrochloric acid production furnaces. Hazardous waste combustors are also subject to applicable requirements under parts 260 through 270 of this chapter.

(a) *What if I am an area source?* (1) Both area sources and major sources are subject to this subpart.

(2) Both area sources and major sources subject to this subpart, but not previously subject to title V, are immediately subject to the requirement to apply for and obtain a title V permit in all States, and in areas covered by part 71 of this chapter.

(b) These regulations in this subpart do not apply to sources that meet the criteria in Table 1 of this Section, as follows:

Table 1 to §63.1200—Hazardous Waste Combustors Exempt From Subpart EEE

If	And if	Then
(1) You are a previously affected source	(i) You ceased feeding hazardous waste for a period of time greater than the hazardous waste residence time (i.e., hazardous waste no longer resides in the combustion chamber); (ii) You have initiated the closure requirements of subpart G, parts 264 or 265 of this chapter; (iii) You begin complying with the requirements of all other applicable standards of this part (Part 63); and (iv) You notify the Administrator in writing that you are no longer an affected source under this subpart (Subpart EEE)	You are no longer subject to this subpart (Subpart EEE).
(2) You are a research, development, and demonstration source	You operate for no longer than one year after first burning hazardous waste (Note that the Administrator can extend this one-year restriction on a case-by-case basis upon your written request documenting when you first burned hazardous waste and the justification for needing additional time to perform research, development, or demonstration operations).	You are not subject to this subpart (Subpart EEE). This exemption applies even if there is a hazardous waste combustor at the plant site that is regulated under this subpart. You still, however, remain subject to §270.65 of this chapter.
(3) The only hazardous wastes you burn are exempt from regulation under §266.100(c) of this chapter		You are not subject to the requirements of this subpart (Subpart EEE).
(4) You meet the definition of a small quantity burner under §266.108 of this chapter		You are not subject to the requirements of this subpart (Subpart EEE).

(c) Table 1 of this section specifies the provisions of subpart A (General Provisions, §§63.1–63.15) that apply and those that do not apply to sources affected by this subpart.

[64 FR 53038, Sept. 30, 1999, as amended at 65 FR 42297, July 10, 2000; 67 FR 6986, Feb. 14, 2002; 70 FR 59540, Oct. 12, 2005]

§ 63.1201 Definitions and acronyms used in this subpart.

(a) The terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Air pollution control system means the equipment used to reduce the release of particulate matter and other pollutants to the atmosphere.

Automatic waste feed cutoff (AWFCO) system means a system comprised of cutoff valves, actuator, sensor, data manager, and other necessary components and electrical circuitry designed, operated and maintained to stop the flow of hazardous waste to the combustion unit automatically and immediately (except as provided by §63.1206(c)(3)(viii)) when any operating requirement is exceeded.

Btu means British Thermal Units.

By-pass duct means a device which diverts a minimum of 10 percent of a cement kiln's off gas, or a device which the Administrator determines on a case-by-case basis diverts a sample of kiln gas that contains levels of carbon monoxide or hydrocarbons representative of the levels in the kiln.

Combustion chamber means the area in which controlled flame combustion of hazardous waste occurs.

Continuous monitor means a device which continuously samples the regulated parameter specified in §63.1209 without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds, except during allowable periods of calibration and except as defined otherwise by the CEMS Performance Specifications in appendix B, part 60 of this chapter.

Dioxin/furan and dioxins and furans mean tetra-, penta-, hexa-, hepta-, and octa-chlorinated dibenzo dioxins and furans.

Existing source means any affected source that is not a new source.

Feedrate operating limits means limits on the feedrate of materials (e.g., metals, chlorine) to the combustor that are established based on comprehensive performance testing. The limits are established and monitored by knowing the concentration of the limited material (e.g., chlorine) in each feedstream and the flowrate of each feedstream.

Feedstream means any material fed into a hazardous waste combustor, including, but not limited to, any pumpable or nonpumpable solid, liquid, or gas.

Flowrate means the rate at which a feedstream is fed into a hazardous waste combustor.

Hazardous waste is defined in §261.3 of this chapter.

Hazardous waste burning cement kiln means a rotary kiln and any associated preheater or precalciner devices that produce clinker by heating limestone and other materials for subsequent production of cement for use in commerce, and that burns hazardous waste at any time.

Hazardous waste combustor means a hazardous waste incinerator, hazardous waste burning cement kiln, hazardous waste burning lightweight aggregate kiln, hazardous waste liquid fuel boiler, hazardous waste solid fuel boiler, or hazardous waste hydrochloric acid production furnace.

Hazardous waste hydrochloric acid production furnace and *Hazardous Waste HCl production furnace* mean a halogen acid furnace defined under §260.10 of this chapter that produces aqueous hydrochloric acid (HCl) product and that burns hazardous waste at any time.

Hazardous waste incinerator means a device defined as an incinerator in §260.10 of this chapter and that burns hazardous waste at any time. For purposes of this subpart, the hazardous waste incinerator includes all associated firing systems and air pollution control devices, as well as the combustion chamber equipment.

Hazardous waste lightweight aggregate kiln means a rotary kiln that produces clinker by heating materials such as slate, shale and clay for subsequent production of lightweight aggregate used in commerce, and that burns hazardous waste at any time.

Hazardous waste liquid fuel boiler means a boiler defined under §260.10 of this chapter that does not burn solid fuels and that burns hazardous waste at any time. Liquid fuel boiler includes boilers that only burn gaseous fuel.

Hazardous waste residence time means the time elapsed from cutoff of the flow of hazardous waste into the combustor (including, for example, the time required for liquids to flow from the cutoff valve into the combustor) until solid, liquid, and gaseous materials from the hazardous waste (excluding residues that may adhere to combustion chamber surfaces and excluding waste-derived recycled materials such as cement kiln dust and internally recycled metals) exit the combustion chamber. For combustors with multiple firing systems whereby the residence time may vary for the firing systems, the hazardous waste residence time for purposes of complying with this subpart means the longest residence time for any firing system in use at the time of the waste cutoff.

Hazardous waste solid fuel boiler means a boiler defined under §260.10 of this chapter that burns a solid fuel and that burns hazardous waste at any time.

Initial comprehensive performance test means the comprehensive performance test that is used as the basis for initially demonstrating compliance with the standards.

In-line kiln raw mill means a hazardous waste burning cement kiln design whereby kiln gas is ducted through the raw material mill for portions of time to facilitate drying and heating of the raw material.

Instantaneous monitoring for combustion system leak control means detecting and recording pressure, without use of an averaging period, at a frequency adequate to detect combustion system leak events from hazardous waste combustion.

Monovent means an exhaust configuration of a building or emission control device (e.g. positive pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i.e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.

MTEC means maximum theoretical emissions concentration of metals or HCl/Cl, expressed as µg/dscm, and is calculated by dividing the feedrate by the gas flowrate.

New source means any affected source the construction or reconstruction of which is commenced after the dates specified under §§63.1206(a)(1)(i)(B), (a)(1)(ii)(B), and (a)(2)(ii).

One-minute average means the average of detector responses calculated at least every 60 seconds from responses obtained at least every 15 seconds.

Operating record means a documentation retained at the facility for ready inspection by authorized officials of all information required by the standards to document and maintain compliance with the applicable regulations, including data and information, reports, notifications, and communications with regulatory officials.

Operating requirements means operating terms or conditions, limits, or operating parameter limits developed under this subpart that ensure compliance with the emission standards.

Preheater tower combustion gas monitoring location means a location within the preheater tower of a dry process cement kiln downstream (in terms of gas flow) of all hazardous waste firing locations and where a representative sample of combustion gas to measure combustion efficiency can be monitored.

Raw material feed means the prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust and flyash, that are fed to a cement or lightweight aggregate kiln. Raw material feed does not include the fuels used in the kiln to produce heat to form the clinker product.

Research, development, and demonstration source means a source engaged in laboratory, pilot plant, or prototype demonstration operations:

(1) Whose primary purpose is to conduct research, development, or short-term demonstration of an innovative and experimental hazardous waste treatment technology or process; and

(2) Where the operations are under the close supervision of technically-trained personnel.

Rolling average means the average of all one-minute averages over the averaging period.

Run means the net period of time during which an air emission sample is collected under a given set of operating conditions. Three or more runs constitutes a test. Unless otherwise specified, a run may be either intermittent or continuous.

Run average means the average of the one-minute average parameter values for a run.

System removal efficiency means [1 − Emission Rate (mass/time) / Feedrate (mass/time)] X 100.

TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

You means the owner or operator of a hazardous waste combustor.

(b) The acronyms used in this subpart refer to the following:

AWFCO means automatic waste feed cutoff.

CAS means chemical abstract services registry.

CEMS means continuous emissions monitoring system.

CMS means continuous monitoring system.

DRE means destruction and removal efficiency.

MACT means maximum achievable control technology.

MTEC means maximum theoretical emissions concentration.

NIC means notification of intent to comply.

[64 FR 53038, Sept. 30, 1999, as amended at 65 FR 42297, July 10, 2000; 65 FR 67271, Nov. 9, 2000; 66 FR 35103, July 3, 2001; 67 FR 6986, Feb. 14, 2002; 67 FR 77691, Dec. 19, 2002; 70 FR 59540, Oct. 12, 2005]

§ 63.1202 [Reserved]

Interim Emissions Standards and Operating Limits For Incinerators, Cement Kilns, and Lightweight Aggregate Kilns

§ 63.1203 What are the standards for hazardous waste incinerators that are effective until compliance with the standards under §63.1219?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400 °F or lower based on the average of the test run average temperatures. (For purposes of compliance, operation of a wet particulate control device is presumed to meet the 400 °F or lower requirement);

(2) Mercury in excess of 130 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 240 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 97 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 77 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 34 mg/dscm corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) Dioxins and furans in excess of 0.20 ng TEQ/dscm, corrected to 7 percent oxygen;

(2) Mercury in excess of 45 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 120 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 97 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 21 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 34 mg/dscm corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic

hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$DRE = [1-(W_{out}/ W_{in})] \times 100\%$

Where:

W_{in}= mass feedrate of one principal organic hazardous constituent (POHC) in a waste feedstream; and

W_{out}= mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principle organic hazardous constituent (POHC) that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo- *p* -dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the Principal Organic Hazardous Constituents (POHCs) in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) The provisions of this section no longer apply after any of the following dates, whichever occurs first:

(1) The date that your source begins to comply with §63.1219 by placing a Documentation of Compliance in the operating record pursuant to §63.1211(c);

(2) The date that your source begins to comply with §63.1219 by submitting a Notification of Compliance pursuant to §63.1210(b); or

(3) The date for your source to comply with §63.1219 pursuant to §63.1206 and any extensions granted there under.

[67 FR 6809, Feb. 13, 2002, as amended at 70 FR 59541, Oct. 12, 2005; 73 FR 18979, Apr. 8, 2008]

§ 63.1204 What are the standards for hazardous waste burning cement kilns that are effective until compliance with the standards under §63.1220?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures;

(2) Mercury in excess of 120 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 330 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 56 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons.* (i) For kilns equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Carbon monoxide in the by-pass duct or mid-kiln gas sampling system in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(i)(B) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons in the by-pass duct or mid-kiln gas sampling system do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B) Hydrocarbons in the by-pass duct or midkiln gas sampling system in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(ii) For kilns not equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Hydrocarbons in the main stack in excess of 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B) Carbon monoxide in the main stack in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii)(A) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons in the main stack do not exceed 20 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(6) Hydrochloric acid and chlorine gas in excess of 130 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis, corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 0.15 kg/Mg dry feed and opacity greater than 20 percent.

(i) You must use suitable methods to determine the kiln raw material feedrate.

(ii) Except as provided in paragraph (a)(7)(iii) of this section, you must compute the particulate matter emission rate, E, from the following equation:

$$E=(C_s \times Q_{sd})/P$$

Where:

E=emission rate of particulate matter, kg/Mg of kiln raw material feed;

C_s=concentration of particulate matter, kg/dscm;

Q_{sd}=volumetric flowrate of effluent gas, dscm/hr; and

P=total kiln raw material feed (dry basis), Mg/hr.

(iii) If you operate a preheater or preheater/precalciner kiln with dual stacks, you must test simultaneously and compute the combined particulate matter emission rate, E_c, from the following equation:

$$E_c=(C_{sk} \times Q_{sdk}+C_{sb} \times Q_{sdb})/P$$

Where:

E_c=the combined emission rate of particulate matter from the kiln and bypass stack, kg/Mg of kiln raw material feed;

C_{sk}=concentration of particulate matter in the kiln effluent, kg/dscm;

Q_{sdk}=volumetric flowrate of kiln effluent gas, dscm/hr;

C_{sb}=concentration of particulate matter in the bypass stack effluent, kg/dscm;

Q_{sdb}=volumetric flowrate of bypass stack effluent gas, dscm/hr; and

P = total kiln raw material feed (dry basis), Mg/hr.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures;

(2) Mercury in excess of 120 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 180 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 54 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons.* (i) For kilns equipped with a by-pass duct or midkiln gas sampling system, carbon monoxide and hydrocarbons emissions are limited in both the bypass duct or midkiln gas sampling system and the main stack as follows:

(A) Emissions in the by-pass or midkiln gas sampling system are limited to either:

(*1*) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(i)(A)(*2*) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(*2*) Hydrocarbons in the by-pass duct or midkiln gas sampling system in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; and

(B) Hydrocarbons in the main stack are limited, if construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(ii) For kilns not equipped with a by-pass duct or midkiln gas sampling system, hydrocarbons and carbon monoxide are limited in the main stack to either:

(A) Hydrocarbons not exceeding 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B)(*1*) Carbon monoxide not exceeding 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen; and

(*2*) Hydrocarbons not exceeding 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7); and

(*3*) If construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, hydrocarbons are limited to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(6) Hydrochloric acid and chlorine gas in excess of 86 parts per million, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 0.15 kg/Mg dry feed and opacity greater than 20 percent.

(i) You must use suitable methods to determine the kiln raw material feedrate.

(ii) Except as provided in paragraph (a)(7)(iii) of this section, you must compute the particulate matter emission rate, E, from the equation specified in paragraph (a)(7)(ii) of this section.

(iii) If you operate a preheater or preheater/precalciner kiln with dual stacks, you must test simultaneously and compute the combined particulate matter emission rate, E_c, from the equation specified in paragraph (a)(7)(iii) of this section.

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE=[1-(W_{out}/W_{in})]\times 100\%$$

Where:

W_{in}=mass feedrate of one principal organic hazardous constituent (POHC) in a waste feedstream; and

W_{out}=mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principle organic hazardous constituent (POHC) that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo- *p* -dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the Principal Organic Hazardous Constituents (POHCs) in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Cement kilns with in-line kiln raw mills* —(1) *General.* (i) You must conduct performance testing when the raw mill is on-line and when the mill is off-line to demonstrate compliance with the emission standards, and you must establish separate operating parameter limits under §63.1209 for each mode of operation, except as provided by paragraph (d)(1)(iv) of this section.

(ii) You must document in the operating record each time you change from one mode of operation to the alternate mode and begin complying with the operating parameter limits for that alternate mode of operation.

(iii) You must calculate rolling averages for operating parameter limits as provided by §63.1209(q)(2).

(iv) If your in-line kiln raw mill has dual stacks, you may assume that the dioxin/furan emission levels in the by-pass stack and the operating parameter limits determined during performance testing of the by-pass stack when the raw mill is off-line are the same as when the mill is on-line.

(2) *Emissions averaging.* You may comply with the mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas emission standards on a time-weighted average basis under the following procedures:

(i) *Averaging methodology.* You must calculate the time-weighted average emission concentration with the following equation:

C_{total}={Cmill-off×(Tmill-off/(Tmill-off+Tmill-on))}+{Cmill-on×(Tmill-on/(Tmill-off+Tmill-on))}

Where:

C_{total}=time-weighted average concentration of a regulated constituent considering both raw mill on time and off time;

Cmill-off=average performance test concentration of regulated constituent with the raw mill off-line;

Cmill-on=average performance test concentration of regulated constituent with the raw mill on-line;

Tmill-off=time when kiln gases are not routed through the raw mill; and

Tmill-on=time when kiln gases are routed through the raw mill.

(ii) *Compliance.* (A) If you use this emission averaging provision, you must document in the operating record compliance with the emission standards on an annual basis by using the equation provided by paragraph (d)(2) of this section.

(B) Compliance is based on one-year block averages beginning on the day you submit the initial notification of compliance.

(iii) *Notification.* (A) If you elect to document compliance with one or more emission standards using this emission averaging provision, you must notify the Administrator in the initial comprehensive performance test plan submitted under §63.1207(e).

(B) You must include historical raw mill operation data in the performance test plan to estimate future raw mill down-time and document in the performance test plan that estimated emissions and estimated raw mill down-time will not result in an exceedance of an emission standard on an annual basis.

(C) You must document in the notification of compliance submitted under §63.1207(j) that an emission standard will not be exceeded based on the documented emissions from the performance test and predicted raw mill down-time.

(e) *Preheater or preheater/precalciner kilns with dual stacks* —(1) *General.* You must conduct performance testing on each stack to demonstrate compliance with the emission standards, and you must establish operating parameter limits under §63.1209 for each stack, except as provided by paragraph (d)(1)(iv) of this section for dioxin/furan emissions testing and operating parameter limits for the by-pass stack of in-line raw mills.

(2) *Emissions averaging.* You may comply with the mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas emission standards specified in this section on a gas flowrate-weighted average basis under the following procedures:

(i) *Averaging methodology.* You must calculate the gas flowrate-weighted average emission concentration using the following equation:

$$C_{tot} = \{C_{main} \times (Q_{main}/(Q_{main} + Q_{bypass}))\} + \{C_{bypass} \times (Q_{bypass}/ (Q_{main} + Q_{bypass}))\}$$

Where:

C_{tot} = gas flowrate-weighted average concentration of the regulated constituent;

C_{main} = average performance test concentration demonstrated in the main stack;

C_{bypass} = average performance test concentration demonstrated in the bypass stack;

Q_{main} = volumetric flowrate of main stack effluent gas; and

Q_{bypass} = volumetric flowrate of bypass effluent gas.

(ii) *Compliance.* (A) You must demonstrate compliance with the emission standard(s) using the emission concentrations determined from the performance tests and the equation provided by paragraph (e)(1) of this section; and

(B) You must develop operating parameter limits for bypass stack and main stack flowrates that ensure the emission concentrations calculated with the equation in paragraph (e)(1) of this section do not exceed the emission standards on a 12-hour rolling average basis. You must include these flowrate limits in the Notification of Compliance.

(iii) *Notification.* If you elect to document compliance under this emissions averaging provision, you must:

(A) Notify the Administrator in the initial comprehensive performance test plan submitted under §63.1207(e). The performance test plan must include, at a minimum, information describing the flowrate limits established under paragraph (e)(2)(ii)(B) of this section; and

(B) Document in the Notification of Compliance submitted under §63.1207(j) the demonstrated gas flowrate-weighted average emissions that you calculate with the equation provided by paragraph (e)(2) of this section.

(f) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(g) [Reserved]

(h) When you comply with the particulate matter requirements of paragraphs (a)(7) or (b)(7) of this section, you are exempt from the New Source Performance Standard for particulate matter and opacity under §60.60 of this chapter.

(i) The provisions of this section no longer apply after any of the following dates, whichever occurs first:

(1) The date that your source begins to comply with §63.1220 by placing a Documentation of Compliance in the operating record pursuant to §63.1211(c);

(2) The date that your source begins to comply with §63.1220 by submitting a Notification of Compliance pursuant to §63.1210(b); or

(3) The date for your source to comply with §63.1220 pursuant to §63.1206 and any extensions granted there under.

[67 FR 6809, Feb. 13, 2002, as amended at 67 FR 6987, Feb. 14, 2002; 70 FR 59541, Oct. 12, 2005; 73 FR 18979, Apr. 8, 2008]

§ 63.1205 What are the standards for hazardous waste burning lightweight aggregate kilns that are effective until compliance with the standards under §63.1221?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Rapid quench of the combustion gas temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system) to 400 °F or lower based on the average of the test run average temperatures. You must also notify in writing the RCRA authority that you are complying with this option;

(2) Mercury in excess of 120 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 250 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 110 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons.* (i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 20 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 600 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 57 mg/dscm corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Rapid quench of the combustion gas temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system) to 400 °F or lower based on the average of the test run average temperatures. You must also notify in writing the RCRA authority that you are complying with this option;

(2) Mercury in excess of 120 µg/dscm corrected to 7 percent oxygen;

(3) Lead and cadmium in excess of 43 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 110 µg/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons.* (i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 20 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrochloric acid and chlorine gas in excess of 600 parts per million by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter in excess of 57 mg/dscm corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE = [1—(W_{out}/ W_{in})] \times 100\%$$

Where:

W_{in}= mass feedrate of one principal organic hazardous constituent (POHC) in a waste feedstream; and

W_{out}= mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principal organic hazardous constituent (POHC) that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to burn hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the Principal Organic Hazardous Constituents (POHCs) in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) The provisions of this section no longer apply after any of the following dates, whichever occurs first:

(1) The date that your source begins to comply with §63.1221 by placing a Documentation of Compliance in the operating record pursuant to §63.1211(c);

(2) The date that your source begins to comply with §63.1221 by submitting a Notification of Compliance pursuant to §63.1210(b); or

(3) The date for your source to comply with §63.1221 pursuant to §63.1206 and any extensions granted there under.

[67 FR 6812, Feb. 13, 2002, as amended at 67 FR 77691, Dec. 19, 2002; 70 FR 59541, Oct. 12, 2005; 73 FR 18979, Apr. 8, 2008]

Monitoring and Compliance Provisions

§ 63.1206 When and how must you comply with the standards and operating requirements?

(a) *Compliance dates* —(1) *Compliance dates for incinerators, cement kilns, and lightweight aggregate kilns that burn hazardous waste* —(i) *Compliance date for standards under §§63.1203, 63.1204, and 63.1205* —(A) *Compliance dates for existing sources.* You must comply with the emission standards under §§63.1203, 63.1204, and 63.1205

and the other requirements of this subpart no later than the compliance date, September 30, 2003, unless the Administrator grants you an extension of time under §63.6(i) or §63.1213, except:

(*1*) Cement kilns are exempt from the bag leak detection system requirements under paragraph (c)(8) of this section;

(*2*) The bag leak detection system required under §63.1206(c)(8) must be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter unless you demonstrate under §63.1209(g)(1) that a higher detection limit would adequately detect bag leaks, in lieu of the requirement for the higher detection limit under paragraph (c)(8)(ii)(A) of this section; and

(*3*) The excessive exceedances notification requirements for bag leak detection systems under paragraph (c)(8)(iv) of this section are waived.

(B) *New or reconstructed sources.* (*1*) If you commenced construction or reconstruction of your hazardous waste combustor after April 19, 1996, you must comply with the emission standards under §§63.1203, 63.1204, and 63.1205 and the other requirements of this subpart by the later of September 30, 1999 or the date the source starts operations, except as provided by paragraphs (a)(1)(i)(A)(*1*) through (*3*) and (a)(1)(i)(B)(*2*) of this section. The costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart, between April 19, 1996 and a source's compliance date, are not considered to be reconstruction costs.

(*2*) For a standard under §§63.1203, 63.1204, and 63.1205 that is more stringent than the standard proposed on April 19, 1996, you may achieve compliance no later than September 30, 2003 if you comply with the standard proposed on April 19, 1996 after September 30, 1999. This exception does not apply, however, to new or reconstructed area source hazardous waste combustors that become major sources after September 30, 1999. As provided by §63.6(b)(7), such sources must comply with the standards under §§63.1203, 63.1204, and 63.1205 at startup.

(ii) *Compliance date for standards under §§63.1219, 63.1220, and 63.1221* —(A) *Compliance dates for existing sources.* You must comply with the emission standards under §§63.1219, 63.1220, and 63.1221 and the other requirements of this subpart no later than the compliance date, October 14, 2008, unless the Administrator grants you an extension of time under §63.6(i) or §63.1213.

(B) *New or reconstructed sources.* (*1*) If you commenced construction or reconstruction of your hazardous waste combustor after April 20, 2004, you must comply with the new source emission standards under §§63.1219, 63.1220, and 63.1221 and the other requirements of this subpart by the later of October 12, 2005 or the date the source starts operations, except as provided by paragraphs (a)(1)(ii)(B)(*2*) and (a)(1)(ii)(B)(*3*) of this section. The costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart, between April 20, 2004, and a source's compliance date, are not considered to be reconstruction costs.

(*2*) For a standard under §§63.1219, 63.1220, and 63.1221 that is more stringent than the standard proposed on April 20, 2004, you may achieve compliance no later than October 14, 2008, if you comply with the standard proposed on April 20, 2004, after October 12, 2005. This exception does not apply, however, to new or reconstructed area source hazardous waste combustors that become major sources after October 14, 2008. As provided by §63.6(b)(7), such sources must comply with the standards under §§63.1219, 63.1220, and 63.1221 at startup.

(*3*) If you commenced construction or reconstruction of a cement kiln after April 20, 2004, you must comply with the new source emission standard for particulate matter under §63.1220(b)(7)(i) by the later of October 28, 2008 or the date the source starts operations.

(2) *Compliance date for solid fuel boilers, liquid fuel boilers, and hydrochloric acid production furnaces that burn hazardous waste for standards under §§63.1216, 63.1217, and 63.1218* . (i) *Compliance date for existing sources.* You must comply with the standards of this subpart no later than the compliance date, October 14, 2008, unless the Administrator grants you an extension of time under §63.6(i) or §63.1213.

(ii) *New or reconstructed sources* . (A) If you commenced construction or reconstruction of your hazardous waste combustor after April 20, 2004, you must comply with the new source emission standards of this subpart by the later of October 12, 2005, or the date the source starts operations, except as provided by paragraph (a)(2)(ii)(B) of this section. The costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart, between April 20, 2004, and a source's compliance date, are not considered to be reconstruction costs.

(B) For a standard in the subpart that is more stringent than the standard proposed on April 20, 2004, you may achieve compliance no later than October 14, 2008, if you comply with the standard proposed on April 20, 2004, after October 12, 2005. This exception does not apply, however, to new or reconstructed area source hazardous waste combustors that become major sources after October 14, 2008. As provided by §63.6(b)(7), such sources must comply with this subpart at startup.

(3) *Early compliance.* If you choose to comply with the emission standards of this subpart prior to the dates specified in paragraphs (a)(1) and (a)(2) of this section, your compliance date is the earlier of the date you postmark the Notification of Compliance under §63.1207(j)(1) or the dates specified in paragraphs (a)(1) and (a)(2) of this section.

(b) *Compliance with standards* —(1) *Applicability.* The emission standards and operating requirements set forth in this subpart apply at all times except:

(i) During periods of startup, shutdown, and malfunction; and

(ii) When hazardous waste is not in the combustion chamber (i.e., the hazardous waste feed to the combustor has been cut off for a period of time not less than the hazardous waste residence time) and you have documented in the operating record that you are complying with all otherwise applicable requirements and standards promulgated under authority of sections 112 (e.g., 40 CFR part 63, subparts LLL, DDDDD, and NNNNN) or 129 of the Clean Air Act in lieu of the emission standards under §§63.1203, 63.1204, 63.1205, 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221; the monitoring and compliance standards of this section and §§63.1207 through 63.1209, except the modes of operation requirements of §63.1209(q); and the notification, reporting, and recordkeeping requirements of §§63.1210 through 63.1212.

(2) *Methods for determining compliance.* The Administrator will determine compliance with the emission standards of this subpart as provided by §63.6(f)(2). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirements of §§63.6(f)(2)(iii)(B) and 63.7(e)(1) to conduct performance testing under representative operating conditions.

(3) *Finding of compliance.* The Administrator will make a finding concerning compliance with the emission standards and other requirements of this subpart as provided by §63.6(f)(3).

(4) *Extension of compliance with emission standards.* The Administrator may grant an extension of compliance with the emission standards of this subpart as provided by §§63.6(i) and 63.1213.

(5) *Changes in design, operation, or maintenance* —(i) *Changes that may adversely affect compliance.* If you plan to change (as defined in paragraph (b)(5)(iii) of this section) the design, operation, or maintenance practices of the source in a manner that may adversely affect compliance with any emission standard that is not monitored with a CEMS:

(A) *Notification.* You must notify the Administrator at least 60 days prior to the change, unless you document circumstances that dictate that such prior notice is not reasonably feasible. The notification must include:

(*1*) A description of the changes and which emission standards may be affected; and

(*2*) A comprehensive performance test schedule and test plan under the requirements of §63.1207(f) that will document compliance with the affected emission standard(s);

(B) *Performance test.* You must conduct a comprehensive performance test under the requirements of §§63.1207(f)(1) and (g)(1) to document compliance with the affected emission standard(s) and establish operating parameter limits as required under §63.1209, and submit to the Administrator a Notification of Compliance under §§63.1207(j) and 63.1210(d); and

(C) *Restriction on waste burning.* (*1*) Except as provided by paragraph (b)(5)(i)(C)(*2*) of this section, after the change and prior to submitting the notification of compliance, you must not burn hazardous waste for more than a total of 720 hours (renewable at the discretion of the Administrator) and only for the purposes of pretesting or comprehensive performance testing. Pretesting is defined at §63.1207(h)(2)(i) and (ii).

(*2*) You may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. You must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission

standards of this subpart based on available information. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements.

(ii) *Changes that will not affect compliance.* If you determine that a change will not adversely affect compliance with the emission standards or operating requirements, you must document the change in the operating record upon making such change. You must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and start-up, shutdown, and malfunction plan to reflect these changes.

(iii) *Definition of "change."* For purposes of paragraph (b)(5) of this section, "change" means any change in design, operation, or maintenance practices that were documented in the comprehensive performance test plan, Notification of Compliance, or startup, shutdown, and malfunction plan.

(6) *Compliance with the carbon monoxide and hydrocarbon emission standards.* This paragraph applies to sources that elect to comply with the carbon monoxide and hydrocarbon emissions standards of this subpart by documenting continuous compliance with the carbon monoxide standard using a continuous emissions monitoring system and documenting compliance with the hydrocarbon standard during the destruction and removal efficiency (DRE) performance test or its equivalent.

(i) If a DRE test performed pursuant to §63.1207(c)(2) is acceptable as documentation of compliance with the DRE standard, you may use the highest hourly rolling average hydrocarbon level achieved during the DRE test runs to document compliance with the hydrocarbon standard. An acceptable DRE test is any test for which the data and results are determined to meet quality assurance objectives (on a site-specific basis) such that the results adequately demonstrate compliance with the DRE standard.

(ii) If during this acceptable DRE test you did not obtain hydrocarbon emissions data sufficient to document compliance with the hydrocarbon standard, you must either:

(A) Perform, as part of the performance test, an "equivalent DRE test" to document compliance with the hydrocarbon standard. An equivalent DRE test is comprised of a minimum of three runs each with a minimum duration of one hour during which you operate the combustor as close as reasonably possible to the operating parameter limits that you established based on the initial DRE test. You must use the highest hourly rolling average hydrocarbon emission level achieved during the equivalent DRE test to document compliance with the hydrocarbon standard; or

(B) Perform a DRE test as part of the performance test.

(7) *Compliance with the DRE standard.* (i) Except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section:

(A) You must document compliance with the Destruction and Removal Efficiency (DRE) standard under this subpart only once provided that you do not modify the source after the DRE test in a manner that could affect the ability of the source to achieve the DRE standard.

(B) You may use any DRE test data that documents that your source achieves the required level of DRE provided:

(*1*) You have not modified the design or operation of your source in a manner that could effect the ability of your source to achieve the DRE standard since the DRE test was performed; and,

(*2*) The DRE test data meet quality assurance objectives determined on a site-specific basis.

(ii) *Sources that feed hazardous waste at locations other than the normal flame zone.* (A) Except as provided by paragraph (b)(7)(ii)(B) of this section, if you feed hazardous waste at a location in the combustion system other than the normal flame zone, then you must demonstrate compliance with the DRE standard during each comprehensive performance test;

(B)(*1*) A cement kiln that feeds hazardous waste at a location other than the normal flame zone need only demonstrate compliance with the DRE standard during three consecutive comprehensive performance tests provided that:

(*i*) All three tests achieve the DRE standard in this subpart; and

(*ii*) The design, operation, and maintenance features of each of the three tests are similar;

(*iii*) The data in lieu restriction of §63.1207(c)(2)(iv) does not apply when complying with the provisions of paragraph (b)(7)(ii)(B) of this section;

(*2*) If at any time you change your design, operation, and maintenance features in a manner that could reasonably be expected to affect your ability to meet the DRE standard, then you must comply with the requirements of paragraph (b)(7)(ii)(A) of this section.

(iii) For sources that do not use DRE previous testing to document conformance with the DRE standard pursuant to §63.1207(c)(2), you must perform DRE testing during the initial comprehensive performance test.

(8) *Applicability of particulate matter and opacity standards during particulate matter CEMS correlation tests.* (i) Any particulate matter and opacity standards of parts 60, 61, 63, 264, 265, and 266 of this chapter (i.e., any title 40 particulate or opacity standards) applicable to a hazardous waste combustor do not apply while you conduct particulate matter continuous emissions monitoring system (CEMS) correlation tests (i.e., correlation with manual stack methods) under the conditions of paragraphs (b)(8)(iii) through (vii) of this section.

(ii) Any permit or other emissions or operating parameter limits or conditions, including any limitation on workplace practices, that are applicable to hazardous waste combustors to ensure compliance with any particulate matter and opacity standards of parts 60, 61, 63, 264, 265, and 266 of this chapter (i.e., any title 40 particulate or opacity standards) do not apply while you conduct particulate matter CEMS correlation tests under the conditions of paragraphs (b)(8)(iii) through (vii) of this section.

(iii) For the provisions of this section to apply, you must:

(A) Develop a particulate matter CEMS correlation test plan that includes the following information. This test plan may be included as part of the comprehensive performance test plan required under §§63.1207(e) and (f):

(*1*) Number of test conditions and number of runs for each test condition;

(*2*) Target particulate matter emission level for each test condition;

(*3*) How you plan to modify operations to attain the desired particulate matter emission levels; and

(*4*) Anticipated normal particulate matter emission levels; and

(B) Submit the test plan to the Administrator for approval at least 90 calendar days before the correlation test is scheduled to be conducted.

(iv) The Administrator will review and approve/disapprove the correlation test plan under the procedures for review and approval of the site-specific test plan provided by §63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified by §63.7(c)(3)(i), the plan is considered approved, unless the Administrator has requested additional information.

(v) The particulate matter and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for a correlation test, including all runs of all test conditions, unless more time is approved by the Administrator.

(vi) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after you modify operations to attain the desired particulate matter emissions concentrations, unless you document in the correlation test plan that a longer period of conditioning is appropriate.

(vii) You must return to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.

(9) *Alternative standards for existing or new hazardous waste burning lightweight aggregate kilns using MACT.* (i) You may petition the Administrator to request alternative standards to the mercury or hydrogen chloride/chlorine gas emission standards of this subpart, to the semivolatile metals emission standards under §§63.1205, 63.1221(a)(3)(ii), or 63.1221(b)(3)(ii), or to the low volatile metals emissions standards under §§63.1205, 63.1221(a)(4)(ii), or 63.1221(b)(4)(ii) if:

(A) You cannot achieve one or more of these standards while using maximum achievable control technology (MACT) because of raw material contributions to emissions of mercury, semivolatile metals, low volatile metals, or hydrogen chloride/chlorine gas; or

(B) You determine that mercury is not present at detectable levels in your raw material.

(ii) The alternative standard that you recommend under paragraph (b)(9)(i)(A) of this section may be an operating requirement, such as a hazardous waste feedrate limitation for metals and/or chlorine, and/or an emission limitation.

(iii) The alternative standard must include a requirement to use MACT, or better, applicable to the standard for which the source is seeking relief, as defined in paragraphs (b)(9)(viii) and (ix) of this section.

(iv) *Documentation required.* (A) The alternative standard petition you submit under paragraph (b)(9)(i)(A) of this section must include data or information documenting that raw material contributions to emissions prevent you from complying with the emission standard even though the source is using MACT, as defined under paragraphs (b)(9)(viii) and (ix) of this section, for the standard for which you are seeking relief.

(B) Alternative standard petitions that you submit under paragraph (b)(9)(i)(B) of this section must include data or information documenting that mercury is not present at detectable levels in raw materials.

(v) You must include data or information with semivolatile metal and low volatility metal alternative standard petitions that you submit under paragraph (b)(9)(i)(A) of this section documenting that increased chlorine feedrates associated with the burning of hazardous waste, when compared to non-hazardous waste operations, do not significantly increase metal emissions attributable to raw materials.

(vi) You must include data or information with semivolatile metals, low volatile metals, and hydrogen chloride/chlorine gas alternative standard petitions that you submit under paragraph (b)(9)(i)(A) of this section documenting that semivolatile metals, low volatile metals, and hydrogen chloride/chlorine gas emissions attributable to the hazardous waste only will not exceed the emission standards of this subpart.

(vii) You must not operate pursuant to your recommended alternative standards in lieu of emission standards specified in this subpart:

(A) Unless the Administrator approves the provisions of the alternative standard petition request or establishes other alternative standards; and

(B) Until you submit a revised Notification of Compliance that incorporates the revised standards.

(viii) For purposes of this alternative standard provision, MACT for existing hazardous waste burning lightweight aggregate kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 24 µg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 280,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 57 mg/dscm or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 120,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 57 mg/dscm or less; and

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 2,000,000 µgm/dscm or less, and use of an air pollution control device with a hydrogen chloride/chlorine gas removal efficiency of 85 percent or greater.

(ix) For purposes of this alternative standard provision, MACT for new hazardous waste burning lightweight aggregate kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 4 µg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 280,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 57 mg/dscm or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 46,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 57 mg/dscm or less;

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 14,000,000 µgm/dscm or less, and use of an air pollution control device with a hydrogen chloride/chlorine gas removal efficiency of 99.6 percent or greater.

(10) *Alternative standards for existing or new hazardous waste burning cement kilns using MACT.* (i) You may petition the Administrator to request alternative standards to the mercury or hydrogen chloride/chlorine gas emission standards of this subpart, to the semivolatile metals emission standards under §§63.1204, 63.1220(a)(3)(ii), or 63.1220(b)(3)(ii), or to the low volatile metals emissions standards under §§63.1204, 63.1220(a)(4)(ii), or 63.1220(b)(4)(ii) if:

(A) You cannot achieve one or more of these standards while using maximum achievable control technology (MACT) because of raw material contributions to emissions of mercury, semivolatile metals, low volatile metals, or hydrogen chloride/chlorine gas; or

(B) You determine that mercury is not present at detectable levels in your raw material.

(ii) The alternative standard that you recommend under paragraph (b)(10)(i)(A) of this section may be an operating requirement, such as a hazardous waste feedrate limitation for metals and/or chlorine, and/or an emission limitation.

(iii) The alternative standard must include a requirement to use MACT, or better, applicable to the standard for which the source is seeking relief, as defined in paragraphs (b)(10)(viii) and (ix) of this section.

(iv) *Documentation required.* (A) The alternative standard petition you submit under paragraph (b)(10)(i)(A) of this section must include data or information documenting that raw material contributions to emissions prevent you from complying with the emission standard even though the source is using MACT, as defined in paragraphs (b)(10)(viii) and (ix) of this section, for the standard for which you are seeking relief.

(B) Alternative standard petitions that you submit under paragraph (b)(10)(i)(B) of this section must include data or information documenting that mercury is not present at detectable levels in raw materials.

(v) You must include data or information with semivolatile metal and low volatile metal alternative standard petitions that you submit under paragraph (b)(10)(i)(A) of this section documenting that increased chlorine feedrates associated with the burning of hazardous waste, when compared to non-hazardous waste operations, do not significantly increase metal emissions attributable to raw materials.

(vi) You must include data or information with semivolatile metals, low volatile metals, and hydrogen chloride/chlorine gas alternative standard petitions that you submit under paragraph (b)(10)(i)(A) of this section documenting that emissions of the regulated metals and hydrogen chloride/chlorine gas attributable to the hazardous waste only will not exceed the emission standards in this subpart.

(vii) You must not operate pursuant to your recommended alternative standards in lieu of emission standards specified in this subpart:

(A) Unless the Administrator approves the provisions of the alternative standard petition request or establishes other alternative standards; and

(B) Until you submit a revised Notification of Compliance that incorporates the revised standards.

(viii) For purposes of this alternative standard provision, MACT for existing hazardous waste burning cement kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 88 µg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 31,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 54,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less; and

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 720,000 µgm/dscm or less.

(ix) For purposes of this alternative standard provision, MACT for new hazardous waste burning cement kilns is defined as:

(A) For mercury, a hazardous waste feedrate corresponding to an MTEC of 7 µg/dscm or less;

(B) For semivolatile metals, a hazardous waste feedrate corresponding to an MTEC of 31,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less;

(C) For low volatile metals, a hazardous waste feedrate corresponding to an MTEC of 15,000 µg/dscm or less, and use of a particulate matter control device that achieves particulate matter emissions of 0.15 kg/Mg dry feed or less;

(D) For hydrogen chloride/chlorine gas, a hazardous waste chlorine feedrate corresponding to an MTEC of 420,000 µgm/dscm or less.

(11) *Calculation of hazardous waste residence time.* You must calculate the hazardous waste residence time and include the calculation in the performance test plan under §63.1207(f) and the operating record. You must also provide the hazardous waste residence time in the Documentation of Compliance under §63.1211(c) and the Notification of Compliance under §§63.1207(j) and 63.1210(d).

(12) *Documenting compliance with the standards based on performance testing.* (i) You must conduct a minimum of three runs of a performance test required under §63.1207 to document compliance with the emission standards of this subpart.

(ii) You must document compliance with the emission standards based on the arithmetic average of the emission results of each run, except that you must document compliance with the destruction and removal efficiency standard for each run of the comprehensive performance test individually.

(13) *Cement kilns and lightweight aggregate kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired.* (i) Cement kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the carbon monoxide and hydrocarbon standards of this subpart as follows:

(A) For existing sources, you must not discharge or cause combustion gases to be emitted into the atmosphere that contain either:

(*1*) Hydrocarbons in the main stack in excess of 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(*2*) Hydrocarbons both in the by-pass duct and at a preheater tower combustion gas monitoring location in excess of 10 parts per million by volume, at each location, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(*3*) If the only firing location of hazardous waste upstream (in terms of gas flow) of the point where combustion gases are diverted into the bypass duct is at the kiln end where products are normally discharged, then both hydrocarbons at the preheater tower combustion gas monitoring location in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, and either hydrocarbons in the by-pass duct in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, or carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, and corrected to 7 percent oxygen. If you comply with the carbon monoxide standard of 100 parts per million by volume in the by-pass duct, then you must also not discharge or cause combustion gases to be emitted into the atmosphere that contain hydrocarbons in the by-pass duct in excess of 10

parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7).

(B) For new sources, you must not discharge or cause combustion gases to be emitted into the atmosphere that contain either:

(*1*) Hydrocarbons in the main stack in excess of 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(*2*)(*i*) Hydrocarbons both in the by-pass duct and at a preheater tower combustion gas monitoring location in excess of 10 parts per million by volume, at each location, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, and

(*ii*) Hydrocarbons in the main stack, if construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(*3*)(*i*) If the only firing location of hazardous waste upstream (in terms of gas flow) of the point where combustion gases are diverted into the bypass duct is at the kiln end where products are normally discharged, then both hydrocarbons at the preheater tower combustion gas monitoring location in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, and either hydrocarbons in the by-pass duct in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, or carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, and corrected to 7 percent oxygen. If you comply with the carbon monoxide standard of 100 parts per million by volume in the by-pass duct, then you must also not discharge or cause combustion gases to be emitted into the atmosphere that contain hydrocarbons in the by-pass duct in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7).

(*ii*) If construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, hydrocarbons are limited to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(ii) Lightweight aggregate kilns that feed hazardous waste at a location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon standards of this subpart as follows:

(A) Existing sources must comply with the 20 parts per million by volume hydrocarbon standard of this subpart;

(B) New sources must comply with the 20 parts per million by volume hydrocarbon standard of this subpart.

(14) *Alternative to the particulate matter standard for incinerators* —(i) *General.* In lieu of complying with the particulate matter standards under §63.1203, you may elect to comply with the following alternative metal emission control requirements:

(ii) *Alternative metal emission control requirements for existing incinerators.* (A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 240 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 97 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(iii) *Alternative metal emission control requirements for new incinerators.* (A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 24 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 97 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(iv) *Operating limits* . Semivolatile and low volatile metal operating parameter limits must be established to ensure compliance with the alternative emission limitations described in paragraphs (b)(14)(ii) and (iii) of this section pursuant to §63.1209(n), except that semivolatile metal feedrate limits apply to lead, cadmium, and selenium, combined, and low volatile metal feedrate limits apply to arsenic, beryllium, chromium, antimony, cobalt, manganese, and nickel, combined.

(15) *Alternative to the interim standards for mercury for cement and lightweight aggregate kilns.* —(i) *General.* In lieu of complying with the applicable mercury standards of §§63.1204(a)(2) and (b)(2) for existing and new cement kilns and §§63.1205(a)(2) and (b)(2) for existing and new lightweight aggregate kilns, you may instead elect to comply with the alternative mercury standard described in paragraphs (b)(15)(ii) through (b)(15)(v) of this section.

(ii) *Operating requirement.* You must not exceed a hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) of 120 µg/dscm on a twelve-hour rolling average.

(iii) To document compliance with the operating requirement of paragraph (b)(15)(ii) of this section, you must:

(A) Monitor and record the feedrate of mercury for each hazardous waste feedstream according to §63.1209(c);

(B) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate);

(C) Continuously calculate and record in the operating record a MTEC assuming mercury from all hazardous waste feedstreams is emitted;

(D) Interlock the MTEC calculated in paragraph (b)(15)(iii)(C) of this section to the AWFCO system to stop hazardous waste burning when the MTEC exceeds the operating requirement of paragraph (b)(15)(ii) of this section.

(iv) In lieu of the requirement in paragraph (b)(15)(iii) of this section, you may:

(A) Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury from all hazardous waste feedstreams that ensures the MTEC calculated in paragraph (b)(15)(iii)(C) of this section is below the operating requirement of paragraph (b)(15)(ii) of this section; and

(B) Interlock the minimum gas flowrate limit and maximum feedrate limits in paragraph (b)(15)(iv)(A) of this section to the AWFCO system to stop hazardous waste burning when the gas flowrate or mercury feedrate exceeds the limits in paragraph (b)(15)(iv)(A) of this section.

(v) *Notification requirement.* You must notify in writing the RCRA authority that you intend to comply with the alternative standard.

(16) *Compliance with subcategory standards for liquid fuel boilers.* You must comply with the mercury, semivolatile metals, low volatile metals, and hydrogen chloride and chlorine standards for liquid fuel boilers under §63.1217 as follows:

(i) You must determine the as-fired heating value of each batch of hazardous waste fired by each firing system of the boiler so that you know the mass-weighted heating value of the hazardous waste fired at all times.

(ii) If the as-fired heating value of the hazardous waste is 10,000 Btu per pound or greater, you are subject to the thermal emission concentration standards (lb/million Btu) under §63.1217.

(iii) If the as-fired heating value of the hazardous waste is less than 10,000 Btu/lb, you are subject to the mass or volume emission concentration standards (µgm/dscm or ppmv) under §63.1217.

(iv) If the as-fired heating value of hazardous wastes varies above and below 10,000 Btu/lb over time, you are subject to the thermal concentration standards when the heating value is 10,000 Btu/lb or greater and the mass concentration standards when the heating value is less than 10,000 Btu/lb. You may elect to comply at all times with the more stringent operating requirements that ensure compliance with both the thermal emission concentration standards and the mass or volume emission concentration standards.

(c) *Operating requirements* —(1) *General.* (i) You must operate only under the operating requirements specified in the Documentation of Compliance under §63.1211(c) or the Notification of Compliance under §§63.1207(j) and 63.1210(d), except:

(A) During performance tests under approved test plans according to §63.1207(e), (f), and (g), and

(B) Under the conditions of paragraph (b)(1)(i) or (ii) of this section;

(ii) The Documentation of Compliance and the Notification of Compliance must contain operating requirements including, but not limited to, the operating requirements in this section and §63.1209

(iii) Failure to comply with the operating requirements is failure to ensure compliance with the emission standards of this subpart;

(iv) Operating requirements in the Notification of Compliance are applicable requirements for purposes of parts 70 and 71 of this chapter;

(v) The operating requirements specified in the Notification of Compliance will be incorporated in the title V permit.

(2) *Startup, shutdown, and malfunction plan.* (i) You are subject to the startup, shutdown, and malfunction plan requirements of §63.6(e)(3).

(ii) If you elect to comply with §§270.235(a)(1)(iii), 270.235(a)(2)(iii), or 270.235(b)(1)(ii) of this chapter to address RCRA concerns that you minimize emissions of toxic compounds from startup, shutdown, and malfunction events (including releases from emergency safety vents):

(A) The startup, shutdown, and malfunction plan must include a description of potential causes of malfunctions, including releases from emergency safety vents, that may result in significant releases of hazardous air pollutants, and actions the source is taking to minimize the frequency and severity of those malfunctions.

(B) You must submit the startup, shutdown, and malfunction plan to the Administrator for review and approval.

(*1*) *Approval procedure.* The Administrator will notify you of approval or intention to deny approval of the startup, shutdown, and malfunction plan within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplemental information that you submit. Before disapproving the plan, the Administrator will notify you of the Administrator's intention to disapprove the plan together with:

(*i*) Notice of the information and findings on which intended disapproval is based; and

(*ii*) Notice of opportunity for you to present additional information to the Administrator before final action on disapproval of the plan. At the time the Administrator notifies you of intention to disapprove the plan, the Administrator will specify how much time you will have after being notified on the intended disapproval to submit additional information.

(*2*) *Responsibility of owners and operators.* You are responsible for ensuring that you submit any supplementary and additional information supporting your plan in a timely manner to enable the Administrator to consider whether to approve the plan. Neither your submittal of the plan, nor the Administrator's failure to approve or disapprove the plan, relieves you of the responsibility to comply with the provisions of this subpart.

(C) *Changes to the plan that may significantly increase emissions.* (*1*) You must request approval in writing from the Administrator within 5 days after making a change to the startup, shutdown, and malfunction plan that may significantly increase emissions of hazardous air pollutants.

(*2*) To request approval of such changes to the startup, shutdown, and malfunction plan, you must follow the procedures provided by paragraph (c)(2)(ii)(B) of this section for initial approval of the plan.

(iii) You must identify in the plan a projected oxygen correction factor based on normal operations to use during periods of startup and shutdown.

(iv) You must record the plan in the operating record.

(v) *Operating under the startup, shutdown, and malfunction plan* —(A) *Compliance with AWFCO requirements during malfunctions.* (*1*) During malfunctions, the automatic waste feed cutoff requirements of §63.1206(c)(3) continue to apply, except for paragraphs (c)(3)(v) and (c)(3)(vi) of this section. If you exceed a part 63, subpart EEE, of this chapter emission standard monitored by a CEMS or COMs or operating limit specified under §63.1209, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of this section. If the malfunction itself prevents immediate and automatic cutoff of the hazardous waste feed, however, you must cease feeding hazardous waste as quickly as possible.

(*2*) Although the automatic waste feed cutoff requirements continue to apply during a malfunction, an exceedance of an emission standard monitored by a CEMS or COMS or operating limit specified under §63.1209 is not a violation of this subpart if you take the corrective measures prescribed in the startup, shutdown, and malfunction plan.

(*3*) *Excessive exceedances during malfunctions.* For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must:

(*i*) Within 45 days of the 10th exceedance, complete an investigation of the cause of each exceedance and evaluation of approaches to minimize the frequency, duration, and severity of each exceedance, and revise the startup, shutdown, and malfunction plan as warranted by the evaluation to minimize the frequency, duration, and severity of each exceedance; and

(*ii*) Record the results of the investigation and evaluation in the operating record, and include a summary of the investigation and evaluation, and any changes to the startup, shutdown, and malfunction plan, in the excess emissions report required under §63.10(e)(3).

(B) *Compliance with AWFCO requirements when burning hazardous waste during startup and shutdown.* (*1*) If you feed hazardous waste during startup or shutdown, you must include waste feed restrictions (e.g., type and quantity), and other appropriate operating conditions and limits in the startup, shutdown, and malfunction plan.

(*2*) You must interlock the operating limits you establish under paragraph (c)(2)(v)(B)(*1*) of this section with the automatic waste feed cutoff system required under §63.1206(c)(3), except for paragraphs (c)(3)(v) and (c)(3)(vi) of this section.

(*3*) When feeding hazardous waste during startup or shutdown, the automatic waste feed cutoff system must immediately and automatically cutoff the hazardous waste feed if you exceed the operating limits you establish under paragraph (c)(2)(v)(B)(*1*) of this section, except as provided by paragraph (c)(3)(viii) of this section.

(*4*) Although the automatic waste feed cutoff requirements of this paragraph apply during startup and shutdown, an exceedance of an emission standard or operating limit is not a violation of this subpart if you comply with the operating procedures prescribed in the startup, shutdown, and malfunction plan.

(3) *Automatic waste feed cutoff (AWFCO)* —(i) *General.* Upon the compliance date, you must operate the hazardous waste combustor with a functioning system that immediately and automatically cuts off the hazardous waste feed, except as provided by paragraph (c)(3)(viii) of this section:

(A) When any of the following are exceeded: Operating parameter limits specified under §63.1209; an emission standard monitored by a CEMS; and the allowable combustion chamber pressure;

(B) When the span value of any CMS detector, except a CEMS, is met or exceeded;

(C) Upon malfunction of a CMS monitoring an operating parameter limit specified under §63.1209 or an emission level; or

(D) When any component of the automatic waste feed cutoff system fails.

(ii) *Ducting of combustion gases.* During an AWFCO, you must continue to duct combustion gasses to the air pollution control system while hazardous waste remains in the combustion chamber (i.e., if the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated).

(iii) *Restarting waste feed.* You must continue to monitor during the cutoff the operating parameters for which limits are established under §63.1209 and the emissions required under that section to be monitored by a CEMS, and you must not restart the hazardous waste feed until the operating parameters and emission levels are within the specified limits.

(iv) *Failure of the AWFCO system.* If the AWFCO system fails to automatically and immediately cutoff the flow of hazardous waste upon exceedance of a parameter required to be interlocked with the AWFCO system under paragraph (c)(3)(i) of this section, you have failed to comply with the AWFCO requirements of paragraph (c)(3) of this section. If an equipment or other failure prevents immediate and automatic cutoff of the hazardous waste feed, however, you must cease feeding hazardous waste as quickly as possible.

(v) *Corrective measures.* If, after any AWFCO, there is an exceedance of an emission standard or operating requirement, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber (i.e., whether the hazardous waste residence time has transpired since the hazardous waste feed cutoff system was activated), you must investigate the cause of the AWFCO, take appropriate corrective measures to minimize future AWFCOs, and record the findings and corrective measures in the operating record.

(vi) *Excessive exceedance reporting.* (A) For each set of 10 exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, you must submit to the Administrator a written report within 5 calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken.

(B) On a case-by-case basis, the Administrator may require excessive exceedance reporting when fewer than 10 exceedances occur during a 60-day block period.

(vii) *Testing.* The AWFCO system and associated alarms must be tested at least weekly to verify operability, unless you document in the operating record that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, you must conduct operability testing at least monthly. You must document and record in the operating record AWFCO operability test procedures and results.

(viii) *Ramping down waste feed.* (A) You may ramp down the waste feedrate of pumpable hazardous waste over a period not to exceed one minute, except as provided by paragraph (c)(3)(viii)(B) of this section. If you elect to ramp down the waste feed, you must document ramp down procedures in the operating and maintenance plan. The procedures must specify that the ramp down begins immediately upon initiation of automatic waste feed cutoff and the procedures must prescribe a bona fide ramping down. If an emission standard or operating limit is exceeded during the ramp down, you have failed to comply with the emission standards or operating requirements of this subpart.

(B) If the automatic waste feed cutoff is triggered by an exceedance of any of the following operating limits, you may not ramp down the waste feed cutoff: Minimum combustion chamber temperature, maximum hazardous waste feedrate, or any hazardous waste firing system operating limits that may be established for your combustor.

(4) *ESV openings* —(i) *Failure to meet standards.* If an emergency safety vent (ESV) opens when hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not expired) during an event other than a malfunction as defined in the startup, shutdown, and malfunction plan such that combustion gases are not treated as during the most recent comprehensive performance test (e.g., if the combustion gas by-passes any emission control device that was operating during the performance test), you must document in the operating record whether you remain in compliance with the emission standards of this subpart considering emissions during the ESV opening event.

(ii) *ESV operating plan.* (A) You must develop an ESV operating plan, comply with the operating plan, and keep the plan in the operating record.

(B) The ESV operating plan must provide detailed procedures for rapidly stopping the waste feed, shutting down the combustor, and maintaining temperature and negative pressure in the combustion chamber during the hazardous

waste residence time, if feasible. The plan must include calculations and information and data documenting the effectiveness of the plan's procedures for ensuring that combustion chamber temperature and negative pressure are maintained as is reasonably feasible.

(iii) *Corrective measures.* After any ESV opening that results in a failure to meet the emission standards as defined in paragraph (c)(4)(i) of this section, you must investigate the cause of the ESV opening, take appropriate corrective measures to minimize such future ESV openings, and record the findings and corrective measures in the operating record.

(iv) *Reporting requirements.* You must submit to the Administrator a written report within 5 days of an ESV opening that results in failure to meet the emission standards of this subpart (as determined in paragraph (c)(4)(i) of this section) documenting the result of the investigation and corrective measures taken.

(5) *Combustion system leaks.* (i) Combustion system leaks of hazardous air pollutants must be controlled by:

(A) Keeping the combustion zone sealed to prevent combustion system leaks; or

(B) Maintaining the maximum combustion zone pressure lower than ambient pressure using an instantaneous monitor; or

(C) Upon prior written approval of the Administrator, an alternative means of control to provide control of combustion system leaks equivalent to maintenance of combustion zone pressure lower than ambient pressure; or

(D) Upon prior written approval of the Administrator, other technique(s) which can be demonstrated to prevent fugitive emissions without use of instantaneous pressure limits; and

(ii) You must specify in the performance test workplan and Notification of Compliance the method that will be used to control combustion system leaks. If you control combustion system leaks by maintaining the combustion zone pressure lower than ambient pressure using an instantaneous monitor, you must also specify in the performance test workplan and Notification of Compliance the monitoring and recording frequency of the pressure monitor, and specify how the monitoring approach will be integrated into the automatic waste feed cutoff system.

(6) *Operator training and certification.* (i) You must establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the source. Such persons include, but are not limited to, chief facility operators, control room operators, continuous monitoring system operators, persons that sample and analyze feedstreams, persons that manage and charge feedstreams to the combustor, persons that operate emission control devices, and ash and waste handlers. Each training program shall be of a technical level commensurate with the person's job duties specified in the training manual. Each commensurate training program shall require an examination to be administered by the instructor at the end of the training course. Passing of this test shall be deemed the “certification” for personnel, except that, for control room operators, the training and certification program shall be as specified in paragraphs (c)(6)(iii) through (c)(6)(vi) of this section.

(ii) You must ensure that the source is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants. A certified control room operator must be on duty at the site at all times the source is in operation.

(iii) Hazardous waste incinerator control room operators must:

(A) Be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of paragraph (c)(6)(v) of this section; or

(B) Be trained under the requirements of, and certified under, one of the following American Society of Mechanical Engineers (ASME) standards: QHO–1–1994, QHO–1a–1996, or QHO–1–2004 (Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators). If you elect to use the ASME program:

(*1*) Control room operators must, prior to the compliance date, achieve provisional certification, and must submit an application to ASME and be scheduled for the full certification exam. Within one year of the compliance date, control room operators must achieve full certification;

(*2*) New operators and operators of new sources must, before assuming their duties, achieve provisional certification, and must submit an application to ASME, and be scheduled for the full certification exam. Within one year of assuming their duties, these operators must achieve full certification; or

(C) Be trained and certified under a State program.

(iv) Control room operators of cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, and hydrochloric acid production furnaces must be trained and certified under:

(A) A site-specific, source-developed and implemented program that meets the requirements of paragraph (c)(6)(v) of this section; or

(B) A State program.

(v) Site-specific, source developed and implemented training programs for control room operators must include the following elements:

(A) Training on the following subjects:

(*1*) Environmental concerns, including types of emissions;

(*2*) Basic combustion principles, including products of combustion;

(*3*) Operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures;

(*4*) Combustion controls and continuous monitoring systems;

(*5*) Operation of air pollution control equipment and factors affecting performance;

(*6*) Inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices;

(*7*) Actions to correct malfunctions or conditions that may lead to malfunction;

(*8*) Residue characteristics and handling procedures; and

(*9*) Applicable Federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards; and

(B) An examination designed and administered by the instructor; and

(C) Written material covering the training course topics that may serve as reference material following completion of the course.

(vi) To maintain control room operator qualification under a site-specific, source developed and implemented training program as provided by paragraph (c)(6)(v) of this section, control room operators must complete an annual review or refresher course covering, at a minimum, the following topics:

(A) Update of regulations;

(B) Combustor operation, including startup and shutdown procedures, waste firing, and residue handling;

(C) Inspection and maintenance;

(D) Responses to malfunctions or conditions that may lead to malfunction; and

(E) Operating problems encountered by the operator.

(vii) You must record the operator training and certification program in the operating record.

(7) *Operation and maintenance plan* —(i) You must prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.

(ii) The plan must prescribe how you will operate and maintain the combustor in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.

(iii) This plan ensures compliance with the operation and maintenance requirements of §63.6(e) and minimizes emissions of pollutants, automatic waste feed cutoffs, and malfunctions.

(iv) You must record the plan in the operating record.

(8) *Bag leak detection system requirements.* (i) If your combustor is equipped with a baghouse (fabric filter), you must continuously operate either:

(A) A bag leak detection system that meets the specifications and requirements of paragraph (c)(8)(ii) of this section and you must comply with the corrective measures and notification requirements of paragraphs (c)(8)(iii) and (iv) of this section; or

(B) A particulate matter detection system under paragraph (c)(9) of this section.

(ii) *Bag leak detection system specification and requirements.* (A) The bag leak detection system must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter unless you demonstrate, under §63.1209(g)(1), that a higher detection limit would routinely detect particulate matter loadings during normal operations;

(B) The bag leak detection system shall provide output of relative or absolute particulate matter loadings;

(C) The bag leak detection system shall be equipped with an alarm system that will sound an audible alarm when an increase in relative particulate loadings is detected over a preset level;

(D) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system;

(E) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time;

(F) Following initial adjustment, you must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the operation and maintenance plan required under paragraph (c)(7) of this section. You must not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition;

(G) For negative pressure or induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector shall be installed downstream of the baghouse and upstream of any wet acid gas scrubber; and

(H) Where multiple detectors are required, the system's instrumentation and alarm system may be shared among the detectors.

(iii) *Bag leak detection system corrective measures requirements* . The operating and maintenance plan required by paragraph (c)(7) of this section must include a corrective measures plan that specifies the procedures you will follow in the case of a bag leak detection system alarm or malfunction. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm or bag leak detection system malfunction in accordance with the requirements of paragraph (c)(8)(iii)(A) of this section as well as the corrective

measures taken to correct the control device or bag leak detection system malfunction or to minimize emissions in accordance with the requirements of paragraph (c)(8)(iii)(B) of this section. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards in this subpart.

(A) You must initiate the procedures used to determine the cause of the alarm or bag leak detection system malfunction within 30 minutes of the time the alarm first sounds; and

(B) You must alleviate the cause of the alarm or bag leak detection system malfunction by taking the necessary corrective measure(s) which may include, but are not to be limited to, the following:

(*1*) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions;

(*2*) Sealing off defective bags or filter media;

(*3*) Replacing defective bags or filter media, or otherwise repairing the control device;

(*4*) Sealing off a defective baghouse compartment;

(*5*) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or

(*6*) Shutting down the combustor.

(iv) *Excessive exceedances notification* . If you operate the combustor when the detector response exceeds the alarm set-point or the bag leak detection system is malfunctioning more than 5 percent of the time during any 6-month block time period, you must submit a notification to the Administrator within 30 days of the end of the 6-month block time period that describes the causes of the exceedances and bag leak detection system malfunctions and the revisions to the design, operation, or maintenance of the combustor, baghouse, or bag leak detection system you are taking to minimize exceedances and bag leak detection system malfunctions. To document compliance with this requirement:

(A) You must keep records of the date, time, and duration of each alarm and bag leak detection system malfunction, the time corrective action was initiated and completed, and a brief description of the cause of the alarm or bag leak detection system malfunction and the corrective action taken;

(B) You must record the percent of the operating time during each 6-month period that the alarm sounds and the bag leak detection system malfunctions;

(C) If inspection of the fabric filter demonstrates that no corrective action is required, then no alarm time is counted; and

(D) If corrective action is required, each alarm shall be counted as a minimum of 1 hour. Each bag leak detection system malfunction shall also be counted as a minimum of 1 hour.

(9) *Particulate matter detection system requirements* . You must continuously operate a particulate matter detection system (PMDS) that meets the specifications and requirements of paragraphs (c)(9)(i) through (v) of this section and you must comply with the corrective measures and notification requirements of paragraphs (c)(9)(vii) and (viii) of this section if your combustor either: Is equipped with an electrostatic precipitator or ionizing wet scrubber and you do not establish site-specific control device operating parameter limits under §63.1209(m)(1)(iv) that are linked to the automatic waste feed cutoff system under paragraph (c)(3) of this section, or is equipped with a baghouse (fabric filter) and you do not operate a bag leak detection system as provided by paragraph (c)(8)(i)(B) of this section.

(i) *PMDS requirements* .—(A) The PMDS must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter unless you demonstrate, under §63.1209(g)(1), that a higher detection limit would routinely detect particulate matter loadings during normal operations;

(B) The particulate matter detector shall provide output of relative or absolute particulate matter loadings;

(C) The PMDS shall be equipped with an alarm system that will sound an audible alarm when an increase in relative or absolute particulate loadings is detected over the set-point;

(D) You must install, operate, and maintain the PMDS in a manner consistent with the provisions of paragraph (c)(9) of this section and available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, maintenance and quality assurance of the system.

(*1*) *Set-points established without extrapolation* . If you establish the alarm set-point without extrapolation under paragraph (c)(9)(iii)(A) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that will reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below those demonstrated during the comprehensive performance test. Your recommended quality assurance procedures may include periodic testing under as-found conditions (i.e., normal operations) to obtain additional PM concentration and PMDS response run pairs, as warranted.

(*2*) *Set-points established with extrapolation* . If you establish the alarm set-point by extrapolation under paragraph (c)(9)(iii)(B) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that will reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below the value that correlates to the alarm set-point.

(E) You must include procedures for installation, operation, maintenance, and quality assurance of the PMDS in the site-specific continuous monitoring system test plan required under §§63.1207(e) and 63.8(e)(3);

(F) Where multiple detectors are required to monitor multiple control devices, the system's instrumentation and alarm system may be shared among the detectors.

(G) You must establish the alarm set-point as a 6-hour rolling average as provided by paragraphs (c)(9)(ii), (c)(9)(iii), and (c)(9)(iv) of this section;

(H) Your PMDS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must update the 6-hour rolling average of the detector response each hour with a one-hour block average that is the average of the detector responses over each 15-minute block; and

(I) If you exceed the alarm set-point (or if your PMDS malfunctions), you must comply with the corrective measures under paragraph (c)(9)(vii) of this section.

(ii) *Establishing the alarm set-point for operations under the Documentation of Compliance* . You must establish the alarm set-point for operations under the Documentation of Compliance (i.e., after the compliance date but prior to submitting a Notification of Compliance subsequent to conducting the initial comprehensive performance test) of an existing source as follows:

(A) You must obtain a minimum of three pairs of Method 5 or 5I data, provided in appendix A–3 to part 60 of this chapter, and PMDS data to establish an approximate correlation curve. Data obtained up to 60 months prior to the compliance date may be used provided that the design and operation of the combustor or PMDS has not changed in a manner that may adversely affect the correlation of PM concentrations and PMDS response.

(B) You must request approval from the regulatory authority, in the continuous monitoring system test plan, of your determination whether multiple correlation curves are needed considering the design and operation of your combustor and PMDS.

(C) You must approximate the correlation of the reference method data to the PMDS data.

(*1*) You may assume a linear correlation of the PMDS response to particulate matter emission concentrations;

(*2*) You may include a zero point correlation value. To establish a zero point, you must follow one or more of the following steps:

(*i*) Zero point data for in-situ instruments should be obtained, to the extent possible, by removing the instrument from the stack and monitoring ambient air on a test bench;

(*ii*) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air;

(*iii*) Zero point data also can be obtained by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas); and

(*iv*) If none of the steps in paragraphs (c)(9)(ii)(B)(*2*)(*i*) through (*iii*) of this section are possible, you must estimate the monitor response when no PM is in the flue gas (e.g., 4 mA = 0 mg/acm).

(*3*) For reference method data that were obtained from runs during a test condition where controllable operating factors were held constant, you must average the test run averages of PM concentrations and PMDS responses to obtain a single pair of data for PM concentration and PMDS response. You may use this pair of data and the zero point to define a linear correlation model for the PMDS.

(D) You must establish the alarm set-point as the PMDS response that corresponds to a PM concentration that is 50% of the PM emission standard or 125% of the highest PM concentration used to develop the correlation, whichever is greater. For reference method data that were obtained from runs during a test condition where controllable operating factors were held constant, you must use the average of the test run averages of PM concentrations for extrapolating the alarm set-point. The PM emission concentration used to extrapolate the alarm set-point must not exceed the PM emission standard, however.

(iii) *Establishing the initial alarm set-point for operations under the Notification of Compliance* . You must establish the initial alarm set-point for operations under the Notification of Compliance as provided by either paragraph (c)(9)(iii)(A) or paragraph (c)(9)(iii)(B) of this section. You must periodically revise the alarm set-point as provided by paragraph (c)(9)(iv) of this section.

(A) *Establishing the initial set-point without extrapolation* . (*1*) If you establish the initial alarm set-point without extrapolation, the alarm set-point is the average of the test run averages of the PMDS response during the runs of the comprehensive performance test that document compliance with the PM emission standard.

(*2*) During the comprehensive performance test, you may simulate PM emission concentrations at the upper end of the range of normal operations by means including feeding high levels of ash and detuning the emission control equipment.

(B) *Establishing the initial set-point by extrapolation* . You may extrapolate the particulate matter detector response to establish the alarm set-point under the following procedures:

(*1*) You must request approval from the regulatory authority, in the continuous monitoring system test plan, of the procedures you will use to establish an approximate correlation curve using the three pairs of Method 5 or 5I data (see methods in appendix A–3 of part 60 of this chapter) and PMDS data from the comprehensive performance test, the data pairs used to establish the correlation curve for the Documentation of Compliance under paragraph (c)(9)(ii) of this section, and additional data pairs, as warranted.

(*2*) You must request approval from the regulatory authority, in the continuous monitoring system test plan, of your determination of whether multiple correlation curves are needed considering the design and operation of your combustor and PMDS. If so, you must recommend the number of data pairs needed to establish those correlation curves and how the data will be obtained.

(*3*) During the comprehensive performance test, you may simulate PM emission concentrations at the upper end of the range of normal operations by means including feeding high levels of ash and detuning the emission control equipment.

(*4*) Data obtained up to 60 months prior to the comprehensive performance test may be used provided that the design and operation of the combustor or PMDS has not changed in a manner that may adversely affect the correlation of PM concentrations and PMDS response.

(*5*) You may include a zero point correlation value. To establish a zero point, you must follow the procedures under paragraph (c)(9)(ii)(C)(*2*) of this section.

(*6*) You must use a least-squares regression model to correlate PM concentrations to PMDS responses for data pairs. You may assume a linear regression model approximates the relationship between PM concentrations and PMDS responses.

(*7*) You must establish the alarm set-point as the PMDS response that corresponds to a PM concentration that is 50% of the PM emission standard or 125% of the highest PM concentration used to develop the correlation, whichever is greater. The emission concentration used to extrapolate the PMDS response must not exceed the PM emission standard.

(iv) *Revising the Notification of Compliance alarm set-point* —(A) *Revising set-points established without extrapolation* . If you establish the alarm set-point without extrapolation under paragraph (c)(9)(iii)(A) of this section, you must establish a new alarm set-point in the Notification of Compliance following each comprehensive performance test as the average of the test run averages of the PMDS response during the runs of the comprehensive performance test that document compliance with the PM emission standard.

(B) *Revising set-points established with extrapolation* . If you establish the alarm set-point by extrapolation under paragraph (c)(9)(iii)(B) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the procedures for periodically revising the alarm set-point, considering the additional data pairs obtained during periodic comprehensive performance tests and data pairs obtained from other tests, such as for quality assurance.

(v) *Quality assurance* —(A) *Set-points established without extrapolation* . If you establish the alarm set-point without extrapolation under paragraph (c)(9)(iii)(A) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below the average of the PM concentrations demonstrated during the comprehensive performance test. Your recommended quality assurance procedures may include periodic testing under as-found conditions (i.e., normal operations) to obtain additional PM concentration and PMDS response run pairs, as warranted.

(B) *Set-points established with extrapolation* . If you establish the alarm set-point by extrapolation under paragraph (c)(9)(iii)(B) of this section, you must request approval from the regulatory authority, in the continuous monitoring system test plan, of the quality assurance procedures that reasonably ensure that PMDS response values below the alarm set-point correspond to PM emission concentrations below the value that correlated to the alarm set-point.

(vi) *PMDS are used for compliance assurance only* . For a PMDS for which the alarm set-point is established by extrapolation using a correlation curve under paragraphs (c)(9)(ii), (c)(9)(iii)(B), and (c)(9)(iv)(B) of this section, an exceedance of the PMDS response that appears to correlate with a PM concentration that exceeds the PM emission standard is not by itself evidence that the standard has been exceeded.

(vii) *PMDS corrective measures requirements* . The operating and maintenance plan required by paragraph (c)(7) of this section must include a corrective measures plan that specifies the procedures you will follow in the case of a PMDS alarm or malfunction. The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm or PMDS malfunction as well as the corrective measures taken to correct the control device or PMDS malfunction or minimize emissions as specified below. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards in this subpart.

(A) You must initiate the procedures used to determine the cause of the alarm or PMDS malfunction within 30 minutes of the time the alarm first sounds or the PMDS malfunctions; and

(B) You must alleviate the cause of the alarm or the PMDS malfunction by taking the necessary corrective measure(s) which may include shutting down the combustor.

(viii) *Excessive exceedances notification* . If you operate the combustor when the detector response exceeds the alarm set-point or when the PMDS is malfunctioning more than 5 percent of the time during any 6-month block time period, you must submit a notification to the Administrator within 30 days of the end of the 6-month block time period that describes the causes of the exceedances and the revisions to the design, operation, or maintenance of the combustor, emission control device, or PMDS you are taking to minimize exceedances. To document compliance with this requirement:

(A) You must keep records of the date, time, and duration of each alarm and PMDS malfunction, the time corrective action was initiated and completed, and a brief description of the cause of the alarm or PMDS malfunction and the corrective action taken;

(B) You must record the percent of the operating time during each 6-month period that the alarm sounds and the PMDS malfunctions;

(C) If inspection of the emission control device demonstrates that no corrective action is required, then no alarm time is counted; and

(D) If corrective action to the emission control device is required, each alarm shall be counted as a minimum of 1 hour. Each PMDS malfunction shall also be counted as a minimum of 1 hour.

[64 FR 53038, Sept. 30, 1999, as amended at 65 FR 42298, July 10, 2000; 65 FR 67271, Nov. 9, 2000; 66 FR 24272, May 14, 2001; 66 FR 35103, July 3, 2001; 66 FR 63317, Dec. 7, 2001; 67 FR 6813, Feb. 13, 2002; 67 FR 6989, Feb. 14, 2002; 67 FR 77691, Dec. 19, 2002; 70 FR 59541, Oct. 12, 2005; 70 FR 75047, Dec. 19, 2005; 71 FR 20459, Apr. 20, 2006; 71 FR 62393, Oct. 25, 2006; 73 FR 18979, Apr. 8, 2008; 73 FR 64094, Oct. 28, 2008]

§ 63.1207 What are the performance testing requirements?

(a) *General.* The provisions of §63.7 apply, except as noted below.

(b) *Types of performance tests* —(1) *Comprehensive performance test.* You must conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by this subpart, establish limits for the operating parameters provided by §63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems.

(2) *Confirmatory performance test.* You must conduct confirmatory performance tests to:

(i) Demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions; and

(ii) Conduct a performance evaluation of continuous monitoring systems required for compliance assurance with the dioxin/furan emission standard under §63.1209(k).

(3) *One-Time Dioxin/Furan Test for Sources Not Subject to a Numerical Dioxin/Furan Standard.* For solid fuel boilers and hydrochloric acid production furnaces, for lightweight aggregate kilns that are not subject to a numerical dioxin/furan emission standard under §63.1221, and liquid fuel boilers that are not subject to a numerical dioxin/furan emission standard under §63.1217, you must conduct a one-time emission test for dioxin/furan under feed and operating conditions that are most likely to reflect daily maximum operating variability, similar to a dioxin/furan comprehensive performance test.

(i) You must conduct the dioxin/furan emissions test no later than the deadline for conducting the initial comprehensive performance test.

(ii) You may use dioxin/furan emissions data from previous testing to meet this requirement, provided that:

(A) The testing was conducted under feed and operating conditions that are most likely to reflect daily maximum operating variability, similar to a dioxin/furan compliance test;

(B) You have not changed the design or operation of the source in a manner that could significantly affect stack gas dioxin/furan emission concentrations; and

(C) The data meet quality assurance objectives that may be determined on a site-specific basis.

(iii) You may use dioxin/furan emissions data from a source to represent emissions from another on-site source in lieu of testing (i.e., data in lieu of testing) if the design and operation, including hazardous waste feed and other feedstreams, of the sources are identical.

(iv) You must include the results of the one-time dioxin/furan emissions test with the results of the initial comprehensive performance test in the Notification of Compliance.

(v) You must repeat the dioxin/furan emissions test if you change the design or operation of the source in a manner that may increase dioxin/furan emissions.

(vi) Sources that are required to perform the one-time dioxin/furan test pursuant to paragraph (b)(3) of this section are not required to perform confirmatory performance tests.

(c) *Initial comprehensive performance test* —(1) *Test date.* Except as provided by paragraphs (c)(2) and (c)(3) of this section, you must commence the initial comprehensive performance test not later than six months after the compliance date.

(2) *Data in lieu of the initial comprehensive performance test.* (i) You may request that previous emissions test data serve as documentation of conformance with the emission standards of this subpart provided that the previous testing:

(A) Was initiated after 54 months prior to the compliance date, except as provided by paragraphs (c)(2)(iii) or (c)(2)(iv) of this section;

(B) Results in data that meet quality assurance objectives (determined on a site-specific basis) such that the results demonstrate compliance with the applicable standards;

(C) Was in conformance with the requirements of paragraph (g)(1) of this section; and

(D) Was sufficient to establish the applicable operating parameter limits under §63.1209.

(ii) You must submit data in lieu of the initial comprehensive performance test in lieu of (i.e., if the data are in lieu of all performance testing) or with the notification of performance test required under paragraph (e) of this section.

(iii) The data in lieu test age restriction provided in paragraph (c)(2)(i)(A) of this section does not apply for the duration of the interim standards (i.e., the standards published in theFederal Registeron February 13, 2002, 67 FR 6792). See 40 CFR parts 63, 264, 265, 266, 270, and 271 revised as of July 1, 2002. Paragraph (c)(2)(i)(A) of this section does not apply until EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in theFederal Registeron November 16, 2001 (66 FR 57715).

(iv) The data in lieu test age restriction provided in paragraph (c)(2)(i)(A) of this section does not apply to DRE data provided you do not feed hazardous waste at a location in the combustion system other than the normal flame zone.

(3) For incinerators, cement kilns, and lightweight aggregate kilns, you must commence the initial comprehensive performance test to demonstrate compliance with the standards under §§63.1219, 63.1220, and 63.1221 not later than 12 months after the compliance date.

(d) *Frequency of testing.* Except as otherwise specified in paragraph (d)(4) of this section, you must conduct testing periodically as prescribed in paragraphs (d)(1) through (d)(3) of this section. The date of commencement of the initial comprehensive performance test is the basis for establishing the deadline to commence the initial confirmatory performance test and the next comprehensive performance test. You may conduct performance testing at any time prior to the required date. The deadline for commencing subsequent confirmatory and comprehensive performance testing is based on the date of commencement of the previous comprehensive performance test. Unless the Administrator grants a time extension under paragraph (i) of this section, you must conduct testing as follows:

(1) *Comprehensive performance testing* . Except as otherwise specified in paragraph (d)(4) of this section, you must commence testing no later than 61 months after the date of commencing the previous comprehensive performance test used to show compliance with §63.1216, §63.1217, §63.1218, §63.1219, §63.1220, or §63.1221. If you submit data in lieu of the initial performance test, you must commence the subsequent comprehensive performance test within 61 months of commencing the test used to provide the data in lieu of the initial performance test.

(2) *Confirmatory performance testing* . Except as otherwise specified in paragraph (d)(4) of this section, you must commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test used to show compliance with §63.1217, §63.1219, §63.1220, or §63.1221. If you submit data in lieu of the initial performance test, you must commence the initial confirmatory performance test within

31 months of the date six months after the compliance date. To ensure that the confirmatory test is conducted approximately midway between comprehensive performance tests, the Administrator will not approve a test plan that schedules testing within 18 months of commencing the previous comprehensive performance test.

(3) *Duration of testing.* You must complete performance testing within 60 days after the date of commencement, unless the Administrator determines that a time extension is warranted based on your documentation in writing of factors beyond your control that prevent you from meeting the 60-day deadline.

(4) *Applicable testing requirements under the interim standards* —(i) *Waiver of periodic comprehensive performance tests* . Except as provided by paragraph (c)(2) of this section, you must conduct only an initial comprehensive performance test under the interim standards (§§63.1203 through 63.1205); all subsequent comprehensive performance testing requirements are waived under the interim standards. The provisions in the introductory text to paragraph (d) and in paragraph (d)(1) of this section apply only to tests used to demonstrate compliance with the standards under §§63.1219 through 63.1221.

(ii) *Waiver of confirmatory performance tests* . You are not required to conduct a confirmatory test under the interim standards (§§63.1203 through 63.1205). The confirmatory testing requirements in the introductory text to paragraph (d) and in paragraph (d)(2) of this section apply only after you have demonstrated compliance with the standards under §§63.1219 through 63.1221.

(e) *Notification of performance test and CMS performance evaluation, and approval of test plan and CMS performance evaluation plan.* (1) The provisions of §63.7(b) and (c) and §63.8(e) apply, except:

(i) *Comprehensive performance test.* You must submit to the Administrator a notification of your intention to conduct a comprehensive performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least one year before the performance test and performance evaluation are scheduled to begin.

(A) The Administrator will notify you of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within 9 months after receipt of the original plan.

(B) You must submit to the Administrator a notification of your intention to conduct the comprehensive performance test at least 60 calendar days before the test is scheduled to begin.

(ii) *Confirmatory performance test.* You must submit to the Administrator a notification of your intention to conduct a confirmatory performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least 60 calendar days before the performance test is scheduled to begin. The Administrator will notify you of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within 30 calendar days after receipt of the original test plans.

(2) You must make your site-specific test plan and CMS performance evaluation test plan available to the public for review no later than 60 calendar days before initiation of the test. You must issue a public notice to all persons on your facility/public mailing list (developed pursuant to 40 CFR 70.7(h), 71.11(d)(3)(i)(E) and 124.10(c)(1)(ix)) announcing the availability of the test plans and the location where the test plans are available for review. The test plans must be accessible to the public for 60 calendar days, beginning on the date that you issue your public notice. The location must be unrestricted and provide access to the public during reasonable hours and provide a means for the public to obtain copies. The notification must include the following information at a minimum:

(i) The name and telephone number of the source's contact person;

(ii) The name and telephone number of the regulatory agency's contact person;

(iii) The location where the test plans and any necessary supporting documentation can be reviewed and copied;

(iv) The time period for which the test plans will be available for public review; and

(v) An expected time period for commencement and completion of the performance test and CMS performance evaluation test.

(3) *Petitions for time extension if Administrator fails to approve or deny test plans.* You may petition the Administrator under §63.7(h) to obtain a “waiver” of any performance test—initial or periodic performance test; comprehensive or

confirmatory test. The “waiver” would be implemented as an extension of time to conduct the performance test at a later date.

(i) *Qualifications for the waiver.* (A) You may not petition the Administrator for a waiver under this section if the Administrator has issued a notification of intent to deny your test plan(s) under §63.7(c)(3)(i)(B);

(B) You must submit a site-specific emissions testing plan and a continuous monitoring system performance evaluation test plan at least one year before a comprehensive performance test is scheduled to begin as required by paragraph (c)(1) of this section, or at least 60 days before a confirmatory performance test is scheduled to begin as required by paragraph (d) of this section. The test plans must include all required documentation, including the substantive content requirements of paragraph (f) of this section and §63.8(e); and

(C) You must make a good faith effort to accommodate the Administrator's comments on the test plans.

(ii) *Procedures for obtaining a waiver and duration of the waiver.* (A) You must submit to the Administrator a waiver petition or request to renew the petition under §63.7(h) separately for each source at least 60 days prior to the scheduled date of the performance test;

(B) The Administrator will approve or deny the petition within 30 days of receipt and notify you promptly of the decision;

(C) The Administrator will not approve an individual waiver petition for a duration exceeding 6 months;

(D) The Administrator will include a sunset provision in the waiver ending the waiver within 6 months;

(E) You may submit a revised petition to renew the waiver under §63.7(h)(3)(iii) at least 60 days prior to the end date of the most recently approved waiver petition;

(F) The Administrator may approve a revised petition for a total waiver period up to 12 months.

(iii) *Content of the waiver.* (A) You must provide documentation to enable the Administrator to determine that the source is meeting the relevant standard(s) on a continuous basis as required by §63.7(h)(2). For extension requests for the initial comprehensive performance test, you must submit your Documentation of Compliance to assist the Administrator in making this determination.

(B) You must include in the petition information justifying your request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test, as required by §63.7(h)(3)(iii).

(iv) *Public notice.* At the same time that you submit your petition to the Administrator, you must notify the public (e.g., distribute a notice to the facility/public mailing list developed pursuant to 40 CFR 70.7(h), 71.11(d)(3)(i)(E) and 124.10(c)(1)(ix)) of your petition to waive a performance test. The notification must include all of the following information at a minimum:

(A) The name and telephone number of the source's contact person;

(B) The name and telephone number of the regulatory agency's contact person;

(C) The date the source submitted its site-specific performance test plan and CMS performance evaluation test plans; and

(D) The length of time requested for the waiver.

(f) *Content of performance test plan.* The provisions of §§63.7(c)(2)(i)–(iii) and (v) regarding the content of the test plan apply. In addition, you must include the following information in the test plan:

(1) *Content of comprehensive performance test plan.* (i) An analysis of each feedstream, including hazardous waste, other fuels, and industrial furnace feedstocks, as fired, that includes:

(A) Heating value, levels of ash (for hazardous waste incinerators only), levels of semivolatile metals, low volatile metals, mercury, and total chlorine (organic and inorganic); and

(B) Viscosity or description of the physical form of the feedstream;

(ii) For organic hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by §63.60:

(A) Except as provided by paragraph (f)(1)(ii)(D) of this section, an identification of such organic hazardous air pollutants that are present in each hazardous waste feedstream. You need not analyze for organic hazardous air pollutants that would reasonably not be expected to be found in the feedstream. You must identify any constituents you exclude from analysis and explain the basis for excluding them. You must conduct the feedstream analysis according to §63.1208(b)(8);

(B) An approximate quantification of such identified organic hazardous air pollutants in the hazardous waste feedstreams, within the precision produced by analytical procedures of §63.1208(b)(8); and

(C) A description of blending procedures, if applicable, prior to firing the hazardous waste feedstream, including a detailed analysis of the materials prior to blending, and blending ratios.

(D) The Administrator may approve on a case-by-case basis a hazardous waste feedstream analysis for organic hazardous air pollutants in lieu of the analysis required under paragraph (f)(1)(ii)(A) of this section if the reduced analysis is sufficient to ensure that the POHCs used to demonstrate compliance with the applicable DRE standards of this subpart continue to be representative of the most difficult to destroy organic compounds in your hazardous waste feedstreams;

(iii) A detailed engineering description of the hazardous waste combustor, including:

(A) Manufacturer's name and model number of the hazardous waste combustor;

(B) Type of hazardous waste combustor;

(C) Maximum design capacity in appropriate units;

(D) Description of the feed system for each feedstream;

(E) Capacity of each feed system;

(F) Description of automatic hazardous waste feed cutoff system(s);

(G) Description of the design, operation, and maintenance practices for any air pollution control system; and

(H) Description of the design, operation, and maintenance practices of any stack gas monitoring and pollution control monitoring systems;

(iv) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;

(v) A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors;

(vi) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the emission standards;

(vii) A description of, and planned operating conditions for, any emission control equipment that will be used;

(viii) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction;

(ix) A determination of the hazardous waste residence time as required by §63.1206(b)(11);

(x) If you are requesting to extrapolate metal feedrate limits from comprehensive performance test levels under §§63.1209(l)(1)(v) or 63.1209(n)(2)(vii):

(A) A description of the extrapolation methodology and rationale for how the approach ensures compliance with the emission standards;

(B) Documentation of the historical range of normal (i.e., other than during compliance testing) metals feedrates for each feedstream;

(C) Documentation that the level of spiking recommended during the performance test will mask sampling and analysis imprecision and inaccuracy to the extent that the extrapolated feedrate limits adequately assure compliance with the emission standards;

(xi) If you do not continuously monitor regulated constituents in natural gas, process air feedstreams, and feedstreams from vapor recovery systems under §63.1209(c)(5), you must include documentation of the expected levels of regulated constituents in those feedstreams;

(xii) Documentation justifying the duration of system conditioning required to ensure the combustor has achieved steady-state operations under performance test operating conditions, as provided by paragraph (g)(1)(iii) of this section;

(xiii) For cement kilns with in-line raw mills, if you elect to use the emissions averaging provision of this subpart, you must notify the Administrator of your intent in the initial (and subsequent) comprehensive performance test plan, and provide the information required by the emission averaging provision;

(xiv) For preheater or preheater/precalciner cement kilns with dual stacks, if you elect to use the emissions averaging provision of this subpart, you must notify the Administrator of your intent in the initial (and subsequent) comprehensive performance test plan, and provide the information required by the emission averaging provision;

(xv) If you request to use Method 23 for dioxin/furan you must provide the information required under §63.1208(b)(1)(i)(B);

(xvi) If you are not required to conduct performance testing to document compliance with the mercury, semivolatile metals, low volatile metals, or hydrogen chloride/chlorine gas emission standards under paragraph (m) of this section, you must include with the comprehensive performance test plan documentation of compliance with the provisions of that section.

(xvii) If you propose to use a surrogate for measuring or monitoring gas flowrate, you must document in the comprehensive performance test plan that the surrogate adequately correlates with gas flowrate, as required by paragraph (m)(7) of this section, and §63.1209(j)(2), (k)(3), (m)(2)(i), (n)(5)(i), and (o)(2)(i).

(xviii) You must submit an application to request alternative monitoring under §63.1209(g)(1) not later than with the comprehensive performance test plan, as required by §63.1209(g)(1)(iii)(A).

(xix) You must document the temperature location measurement in the comprehensive performance test plan, as required by §§63.1209(j)(1)(i) and 63.1209(k)(2)(i).

(xx) If your source is equipped with activated carbon injection, you must document in the comprehensive performance test plan:

(A) The manufacturer specifications for minimum carrier fluid flowrate or pressure drop, as required by §63.1209(k)(6)(ii); and

(B) Key parameters that affect carbon adsorption, and the operating limits you establish for those parameters based on the carbon used during the performance test, if you elect not to specify and use the brand and type of carbon used during the comprehensive performance test, as required by §63.1209(k)(6)(iii).

(xxi) If your source is equipped with a carbon bed system, and you elect not to specify and use the brand and type of carbon used during the comprehensive performance test, you must include in the comprehensive performance test plan key parameters that affect carbon adsorption, and the operating limits you establish for those parameters based on the carbon used during the performance test, as required by §63.1209(k)(7)(ii).

(xxii) If you feed a dioxin/furan inhibitor into the combustion system, you must document in the comprehensive performance test plan key parameters that affect the effectiveness of the inhibitor, and the operating limits you establish for those parameters based on the inhibitor fed during the performance test, if you elect not to specify and use the brand and type of inhibitor used during the comprehensive performance test, as required by §63.1209(k)(9)(ii).

(xxiii) If your source is equipped with a wet scrubber and you elect to monitor solids content of the scrubber liquid manually but believe that hourly monitoring of solids content is not warranted, you must support an alternative monitoring frequency in the comprehensive performance test plan, as required by §63.1209(m)(1)(i)(B)(*1*)(*i*).

(xxiv) If your source is equipped with a particulate matter control device other than a wet scrubber, baghouse, or electrostatic precipitator, you must include in the comprehensive performance test plan:

(A) Documentation to support the operating parameter limits you establish for the control device, as required by §63.1209(m)(1)(iv)(A)(*4*); and

(B) Support for the use of manufacturer specifications if you recommend such specifications in lieu of basing operating limits on performance test operating levels, as required by §63.1209(m)(1)(iv)(D).

(xxv) If your source is equipped with a dry scrubber to control hydrogen chloride and chlorine gas, you must document in the comprehensive performance test plan key parameters that affect adsorption, and the limits you establish for those parameters based on the sorbent used during the performance test, if you elect not to specify and use the brand and type of sorbent used during the comprehensive performance test, as required by §63.1209(o)(4)(iii)(A); and

(xxvi) For purposes of calculating semivolatile metal, low volatile metal, mercury, and total chlorine (organic and inorganic), and ash feedrate limits, a description of how you will handle performance test feedstream analytical results that determines these constituents are not present at detectable levels.

(xxvii) Such other information as the Administrator reasonably finds necessary to determine whether to approve the performance test plan.

(2) *Content of confirmatory test plan.* (i) A description of your normal hydrocarbon or carbon monoxide operating levels, as specified in paragraph (g)(2)(i) of this section, and an explanation of how these normal levels were determined;

(ii) A description of your normal applicable operating parameter levels, as specified in paragraph (g)(2)(ii) of this section, and an explanation of how these normal levels were determined;

(iii) A description of your normal chlorine operating levels, as specified in paragraph (g)(2)(iii) of this section, and an explanation of how these normal levels were determined;

(iv) If you use carbon injection or a carbon bed, a description of your normal cleaning cycle of the particulate matter control device, as specified in paragraph (g)(2)(iv) of this section, and an explanation of how these normal levels were determined;

(v) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;

(vi) A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors;

(vii) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the dioxin/furan emission standard;

(viii) A description of, and planned operating conditions for, any emission control equipment that will be used;

(ix) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction; and

(x) Such other information as the Administrator reasonably finds necessary to determine whether to approve the confirmatory test plan.

(g) *Operating conditions during testing.* You must comply with the provisions of §63.7(e). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirement of §63.7(e)(1) to conduct performance testing under representative operating conditions.

(1) *Comprehensive performance testing* —(i) *Operations during testing.* For the following parameters, you must operate the combustor during the performance test under normal conditions (or conditions that will result in higher than normal emissions):

(A) *Chlorine feedrate.* You must feed normal (or higher) levels of chlorine during the dioxin/furan performance test;

(B) *Ash feedrate.* For hazardous waste incinerators, you must conduct the following tests when feeding normal (or higher) levels of ash: The semivolatile metal and low volatile metal performance tests; and the dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used; and

(C) *Cleaning cycle of the particulate matter control device.* You must conduct the following tests when the particulate matter control device undergoes its normal (or more frequent) cleaning cycle: The particulate matter, semivolatile metal, and low volatile metal performance tests; and the dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used.

(ii) *Modes of operation.* Given that you must establish limits for the applicable operating parameters specified in §63.1209 based on operations during the comprehensive performance test, you may conduct testing under two or more operating modes to provide operating flexibility.

(iii) *Steady-state conditions.* (A) Prior to obtaining performance test data, you must operate under performance test conditions until you reach steady-state operations with respect to emissions of pollutants you must measure during the performance test and operating parameters under §63.1209 for which you must establish limits. During system conditioning, you must ensure that each operating parameter for which you must establish a limit is held at the level planned for the performance test. You must include documentation in the performance test plan under paragraph (f) of this section justifying the duration of system conditioning.

(B) If you own or operate a hazardous waste cement kiln that recycles collected particulate matter (i.e., cement kiln dust) into the kiln, you must sample and analyze the recycled particulate matter prior to obtaining performance test data for levels of selected metals that must be measured during performance testing to document that the system has reached steady-state conditions (i.e., that metals levels have stabilized). You must document the rationale for selecting metals that are indicative of system equilibrium and include the information in the performance test plan under paragraph (f) of this section. To determine system equilibrium, you must sample and analyze the recycled particulate matter hourly for each selected metal, unless you submit in the performance test plan a justification for reduced sampling and analysis and the Administrator approves in writing a reduced sampling and analysis frequency.

(2) *Confirmatory performance testing.* You must conduct confirmatory performance testing for dioxin/furan under normal operating conditions for the following parameters:

(i) Carbon monoxide (or hydrocarbon) CEMS emissions levels must be within the range of the average value to the maximum value allowed, except as provided by paragraph (g)(2)(v) of this section. The average value is defined as the sum of the hourly rolling average values recorded (each minute) over the previous 12 months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste;

(ii) Each operating limit (specified in §63.1209) established to maintain compliance with the dioxin/furan emission standard must be held within the range of the average value over the previous 12 months and the maximum or minimum, as appropriate, that is allowed, except as provided by paragraph (g)(2)(v) of this section. The average value is defined as the sum of the rolling average values recorded over the previous 12 months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste;

(iii) You must feed chlorine at normal feedrates or greater; and

(iv) If the combustor is equipped with carbon injection or carbon bed, normal cleaning cycle of the particulate matter control device.

(v) The Administrator may approve an alternative range to that required by paragraphs (g)(2)(i) and (ii) of this section if you document in the confirmatory performance test plan that it may be problematic to maintain the required range during the test. In addition, when making the finding of compliance, the Administrator may consider test conditions outside of the range specified in the test plan based on a finding that you could not reasonably maintain the range specified in the test plan and considering factors including whether the time duration and level of the parameter when operations were out of the specified range were such that operations during the confirmatory test are determined to be reasonably representative of normal operations. In addition, the Administrator will consider the proximity of the emission test results to the standard.

(h) *Operating conditions during subsequent testing.* (1) Current operating parameter limits established under §63.1209 are waived during subsequent comprehensive performance testing.

(2) Current operating parameter limits are also waived during pretesting prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of the Administrator) under an approved test plan or if the source records the results of the pretesting. Pretesting means:

(i) Operations when stack emissions testing for dioxin/furan, mercury, semivolatile metals, low volatile metals, particulate matter, or hydrogen chloride/chlorine gas is being performed; and

(ii) Operations to reach steady-state operating conditions prior to stack emissions testing under paragraph (g)(1)(iii) of this section.

(i) *Time extension for subsequent performance tests.* After the initial comprehensive performance test, you may request up to a one-year time extension for conducting a comprehensive or confirmatory performance test to consolidate performance testing with other state or federally required emission testing, or for other reasons deemed acceptable by the Administrator. If the Administrator grants a time extension for a comprehensive performance test, the deadlines for commencing the next comprehensive and confirmatory tests are based on the date that the subject comprehensive performance test commences.

(1) You must submit in writing to the Administrator any request under this paragraph for a time extension for conducting a performance test.

(2) You must include in the request for an extension for conducting a performance test the following:

(i) A description of the reasons for requesting the time extension;

(ii) The date by which you will commence performance testing.

(3) The Administrator will notify you in writing of approval or intention to deny approval of your request for an extension for conducting a performance test within 30 calendar days after receipt of sufficient information to evaluate your request. The 30-day approval or denial period will begin after you have been notified in writing that your application is complete. The Administrator will notify you in writing whether the application contains sufficient information to make a determination within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that you submit.

(4) When notifying you that your application is not complete, the Administrator will specify the information needed to complete the application. The Administrator will also provide notice of opportunity for you to present, in writing, within 30 calendar days after notification of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(5) Before denying any request for an extension for performance testing, the Administrator will notify you in writing of the Administrator's intention to issue the denial, together with:

(i) Notice of the information and findings on which the intended denial is based; and

(ii) Notice of opportunity for you to present in writing, within 15 calendar days after notification of the intended denial, additional information or arguments to the Administrator before further action on the request.

(6) The Administrator's final determination to deny any request for an extension will be in writing and will set forth specific grounds upon which the denial is based. The final determination will be made within 30 calendar days after

the presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(j) *Notification of compliance* —(1) *Comprehensive performance test.* (i) Except as provided by paragraphs (j)(4) and (j)(5) of this section, within 90 days of completion of a comprehensive performance test, you must postmark a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under §63.1209.

(ii) Upon postmark of the Notification of Compliance, you must comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under §63.1211(c).

(2) *Confirmatory performance test.* Except as provided by paragraph (j)(4) of this section, within 90 days of completion of a confirmatory performance test, you must postmark a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard.

(3) See §§63.7(g), 63.9(h), and 63.1210(d) for additional requirements pertaining to the Notification of Compliance (e.g., you must include results of performance tests in the Notification of Compliance).

(4) *Time extension.* You may submit a written request to the Administrator for a time extension documenting that, for reasons beyond your control, you may not be able to meet the 90-day deadline for submitting the Notification of Compliance after completion of testing. The Administrator will determine whether a time extension is warranted.

(5) *Early compliance.* If you conduct the initial comprehensive performance test prior to the compliance date, you must postmark the Notification of Compliance within 90 days of completion of the performance test or by the compliance date, whichever is later.

(k) *Failure to submit a timely notification of compliance.* (1) If you fail to postmark a Notification of Compliance by the specified date, you must cease hazardous waste burning immediately.

(2) Prior to submitting a revised Notification of Compliance as provided by paragraph (k)(3) of this section, you may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing and only for a maximum of 720 hours (renewable at the discretion of the Administrator).

(3) You must submit to the Administrator a Notification of Compliance subsequent to a new comprehensive performance test before resuming hazardous waste burning.

(l) *Failure of performance test* —(1) *Comprehensive performance test.* The provisions of this paragraph do not apply to the initial comprehensive performance test if you conduct the test prior to your compliance date.

(i) If you determine (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that you have exceeded any emission standard during a comprehensive performance test for a mode of operation, you must cease hazardous waste burning immediately under that mode of operation. You must make this determination within 90 days following completion of the performance test.

(ii) If you have failed to demonstrate compliance with the emission standards for any mode of operation:

(A) Prior to submitting a revised Notification of Compliance as provided by paragraph (l)(1)(ii)(C) of this section, you may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing under revised operating conditions, and only for a maximum of 720 hours (renewable at the discretion of the Administrator), except as provided by paragraph (l)(3) of this section;

(B) You must conduct a comprehensive performance test under revised operating conditions following the requirements for performance testing of this section; and

(C) You must submit to the Administrator a Notification of Compliance subsequent to the new comprehensive performance test.

(2) *Confirmatory performance test.* If you determine (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that you have failed the dioxin/furan emission standard during a

confirmatory performance test, you must cease burning hazardous waste immediately. You must make this determination within 90 days following completion of the performance test. To burn hazardous waste in the future:

(i) You must submit to the Administrator for review and approval a test plan to conduct a comprehensive performance test to identify revised limits on the applicable dioxin/furan operating parameters specified in §63.1209(k);

(ii) You must submit to the Administrator a Notification of Compliance with the dioxin/furan emission standard under the provisions of paragraphs (j) and (k) of this section and this paragraph (l). You must include in the Notification of Compliance the revised limits on the applicable dioxin/furan operating parameters specified in §63.1209(k); and

(iii) Until the Notification of Compliance is submitted, you must not burn hazardous waste except for purposes of pretesting or confirmatory performance testing, and for a maximum of 720 hours (renewable at the discretion of the Administrator), except as provided by paragraph (l)(3) of this section.

(3) You may petition the Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. You must specify operating requirements, including limits on operating parameters, that you determine will ensure compliance with the emission standards of this subpart based on available information including data from the failed performance test. The Administrator will review, modify as necessary, and approve if warranted the interim operating requirements. An approval of interim operating requirements will include a schedule for submitting a Notification of Compliance.

(m) *Waiver of performance test* . You are not required to conduct performance tests to document compliance with the mercury, semivolatile metals, low volatile metals, or hydrogen chloride/chlorine gas emission standards under the conditions specified in paragraphs (m)(1) or (m)(2) of this section. The waiver provisions of this paragraph apply in addition to the provisions of §63.7(h).

(1) *Emission standards based on exhaust gas flow rate* . (i) You are deemed to be in compliance with an emission standard based on the volumetric flow rate of exhaust gas (i.e., µg/dscm or ppmv) if the maximum theoretical emission concentration (MTEC) does not exceed the emission standard over the relevant averaging period specified under §63.1209(l), (n), and (o) of this section for the standard:

(A) Determine the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride from all feedstreams;

(B) Determine the stack gas flowrate; and

(C) Calculate a MTEC for each standard assuming all mercury, semivolatile metals, low volatile metals, or total chlorine (organic and inorganic) from all feedstreams is emitted;

(ii) To document compliance with this provision, you must:

(A) Monitor and record the feedrate of mercury, semivolatile metals, low volatile metals, and total chlorine and chloride from all feedstreams according to §63.1209(c);

(B) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate);

(C) Continuously calculate and record in the operating record the MTEC under the procedures of paragraph (m)(1)(i) of this section; and

(D) Interlock the MTEC calculated in paragraph (m)(1)(i)(C) of this section to the AWFCO system to stop hazardous waste burning when the MTEC exceeds the emission standard.

(iii) In lieu of the requirement in paragraphs (m)(1)(ii)(C) and (D) of this section, you may:

(A) Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride from all feedstreams that ensures the MTEC as calculated in paragraph (m)(1)(i)(C) of this section is below the applicable emission standard; and

(B) Interlock the minimum gas flowrate limit and maximum feedrate limit of paragraph (m)(1)(iii)(A) of this section to the AWFCO system to stop hazardous waste burning when the gas flowrate or mercury, semivolatile metals, low volatile metals, and/or total chlorine and chloride feedrate exceeds the limits of paragraph (m)(1)(iii)(A) of this section.

(2) *Emission standards based on hazardous waste thermal concentration* . (i) You are deemed to be in compliance with an emission standard specified on a hazardous waste thermal concentration basis (i.e., pounds emitted per million Btu of heat input) if the HAP thermal concentration in the waste feed does not exceed the allowable HAP thermal concentration emission rate.

(ii) To document compliance with this provision, you must:

(A) Monitor and record the feedrate of mercury, semivolatile metals, low volatile metals, and total chlorine and chloride from all hazardous waste feedstreams in accordance with §63.1209(c);

(B) Determine and record the higher heating value of each hazardous waste feed;

(C) Continuously calculate and record the thermal feed rate of all hazardous waste feedstreams by summing the products of each hazardous waste feed rate multiplied by the higher heating value of that hazardous waste;

(D) Continuously calculate and record the total HAP thermal feed concentration for each constituent by dividing the HAP feedrate determined in paragraph (m)(2)(ii)(A) of this section by the thermal feed rate determined in paragraph (m)(2)(ii)(C) of this section for all hazardous waste feedstreams;

(E) Interlock the HAP thermal feed concentration for each constituent with the AWFCO to stop hazardous waste feed when the thermal feed concentration exceeds the applicable thermal emission standard.

(3) When you determine the feedrate of mercury, semivolatile metals, low volatile metals, or total chlorine and chloride for purposes of this provision, except as provided by paragraph (m)(4) of this section, you must assume that the analyte is present at the full detection limit when the feedstream analysis determines that the analyte in not detected in the feedstream.

(4) Owners and operators of hazardous waste burning cement kilns and lightweight aggregate kilns may assume that mercury is present in raw material at half the detection limit when the raw material feedstream analysis determines that mercury is not detected.

(5) You must state in the site-specific test plan that you submit for review and approval under paragraph (e) of this section that you intend to comply with the provisions of this paragraph. You must include in the test plan documentation that any surrogate that is proposed for gas flowrate adequately correlates with the gas flowrate.

[64 FR 53038, Sept. 30, 1999, as amended at 65 FR 42299, July 10, 2000; 65 FR 67271, Nov. 9, 2000; 66 FR 35106, July 3, 2001; 66 FR 63318, Dec. 6, 2001; 67 FR 6814, Feb. 13, 2002; 67 FR 6990, Feb. 14, 2002; 67 FR 77691, Dec. 19, 2002; 70 FR 59546, Oct. 12, 2005; 73 FR 18980, Apr. 8, 2008; 73 FR 64096, Oct. 28, 2008]

§ 63.1208 What are the test methods?

(a) [Reserved]

(b) *Test methods.* You must use the following test methods to determine compliance with the emissions standards of this subpart:

(1) *Dioxins and furans.* (i) To determine compliance with the emission standard for dioxins and furans, you must use:

(A) Method 0023A, Sampling Method for Polychlorinated Dibenzo- *p* -Dioxins and Polychlorinated Dibenzofurans emissions from Stationary Sources, EPA Publication SW–846 (incorporated by reference—see §63.14); or

(B) Method 23, provided in appendix A, part 60 of this chapter, after approval by the Administrator.

(*1*) You may request approval to use Method 23 in the performance test plan required under §63.1207(e)(i) and (ii).

(*2*) In determining whether to grant approval to use Method 23, the Administrator may consider factors including whether dioxin/furan were detected at levels substantially below the emission standard in previous testing, and whether previous Method 0023 analyses detected low levels of dioxin/furan in the front half of the sampling train.

(*3*) Sources that emit carbonaceous particulate matter, such as coal-fired boilers, and sources equipped with activated carbon injection, will be deemed not suitable for use of Method 23 unless you document that there would not be a significant improvement in quality assurance with Method 0023A.

(ii) You must sample for a minimum of three hours, and you must collect a minimum sample volume of 2.5 dscm;

(iii) You may assume that nondetects are present at zero concentration.

(2) *Mercury.* You must use Method 29, provided in appendix A, part 60 of this chapter, to demonstrate compliance with emission standard for mercury.

(3) *Cadmium and lead.* You must use Method 29, provided in appendix A, part 60 of this chapter, to determine compliance with the emission standard for cadmium and lead (combined).

(4) *Arsenic, beryllium, and chromium.* You must use Method 29, provided in appendix A, part 60 of this chapter, to determine compliance with the emission standard for arsenic, beryllium, and chromium (combined).

(5) *Hydrogen chloride and chlorine gas* —(i) *Compliance with MACT standards* . To determine compliance with the emission standard for hydrogen chloride and chlorine gas (combined), you must use:

(A) Method 26/26A as provided in appendix A, part 60 of this chapter; or

(B) Methods 320 or 321 as provided in appendix A, part 63 of this chapter, or

(C) ASTM D 6735–01, Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method to measure emissions of hydrogen chloride, and Method 26/26A to measure emissions of chlorine gas, provided that you follow the provisions in paragraphs (b)(5)(C)(*1*) through (*6*) of this section. ASTM D 6735–01 is available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428–2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.

(*1*) A test must include three or more runs in which a pair of samples is obtained simultaneously for each run according to section 11.2.6 of ASTM Method D6735–01.

(*2*) You must calculate the test run standard deviation of each set of paired samples to quantify data precision, according to Equation 1 of this section:

$$RSD_a = (100)\,\text{Absolute Value}\left[\frac{C1_a - C2_a}{C1_a + C2_a}\right] \qquad \text{(Eq. 1)}$$

Where:

RSD_a= The test run relative standard deviation of sample pair a, percent.

$C1_a$and $C2_a$= The HCl concentrations, milligram/dry standard cubic meter (mg/dscm), from the paired samples.

(*3*) You must calculate the test average relative standard deviation according to Equation 2 of this section:

$$RSD_{TA} = \frac{\sum_{a=1}^{p} RSD_a}{p} \qquad \text{(Eq. 2)}$$

Where:

RSD_{TA}= The test average relative standard deviation, percent.

RSD_a= The test run relative standard deviation for sample pair a.

p = The number of test runs, ≥3.

(*4*) If RSDTA is greater than 20 percent, the data are invalid and the test must be repeated.

(*5*) The post-test analyte spike procedure of section 11.2.7 of ASTM Method D6735–01 is conducted, and the percent recovery is calculated according to section 12.6 of ASTM Method D6735–01.

(*6*) If the percent recovery is between 70 percent and 130 percent, inclusive, the test is valid. If the percent recovery is outside of this range, the data are considered invalid, and the test must be repeated.

(ii) *Compliance with risk-based limits under §63.1215.* To demonstrate compliance with emission limits established under §63.1215, you must use Method 26/26A as provided in appendix A, part 60 of this chapter, Method 320 as provided in appendix A, part 63 of this chapter, Method 321 as provided in appendix A, part 63 of this chapter, or ASTM D 6735–01, Standard Test Method for Measurement of Gaseous Chlorides and Fluorides from Mineral Calcining Exhaust Sources—Impinger Method (following the provisions of paragraphs (b)(5)(C)(*1*) through (*6*) of this section), except:

(A) For cement kilns and sources equipped with a dry acid gas scrubber, you must use Methods 320 or 321 as provided in appendix A, part 63 of this chapter, or ASTM D 6735–01 to measure hydrogen chloride, and the back-half, caustic impingers of Method 26/26A as provided in appendix A, part 60 of this chapter to measure chlorine gas; and

(B) For incinerators, boilers, and lightweight aggregate kilns, you must use Methods 320 or 321 as provided in appendix A, part 63 of this chapter, or ASTM D 6735–01 to measure hydrogen chloride, and Method 26/26A as provided in appendix A, part 60 of this chapter to measure total chlorine, and calculate chlorine gas by difference if:

(*1*) The bromine/chlorine ratio in feedstreams is greater than 5 percent; or

(*2*) The sulfur/chlorine ratio in feedstreams is greater than 50 percent.

(6) *Particulate matter.* You must use Methods 5 or 5I, provided in appendix A, part 60 of this chapter, to demonstrate compliance with the emission standard for particulate matter.

(7) *Other test methods.* You may use applicable test methods in EPA Publication SW-846, as incorporated by reference in paragraph (a) of this section, as necessary to demonstrate compliance with requirements of this subpart, except as otherwise specified in paragraphs (b)(2)–(b)(6) of this section.

(8) *Feedstream analytical methods.* You may use any reliable analytical method to determine feedstream concentrations of metals, chlorine, and other constituents. It is your responsibility to ensure that the sampling and analysis procedures are unbiased, precise, and that the results are representative of the feedstream.

(9) *Opacity.* If you determine compliance with the opacity standard under the monitoring requirements of §§63.1209(a)(1)(iv) and (a)(1)(v), you must use Method 9, provided in appendix A, part 60 of this chapter.

[64 FR 53038, Sept. 30, 1999, as amended at 69 FR 18803, Apr. 9, 2004; 70 FR 34555, June 14, 2005; 70 FR 59547, Oct. 12, 2005]

§ 63.1209 What are the monitoring requirements?

(a) *Continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS).* (1)(i) You must use either a carbon monoxide or hydrocarbon CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standard under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen.

(ii) (A) *Cement kilns under §63.1204.* Except as provided by paragraphs (a)(1)(iv) and (a)(1)(v) of the section, you must use a COMS to demonstrate and monitor compliance with the opacity standard under §§63.1204(a)(7) and

(b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks.

(B) *Cement kilns under §63.1220.* Except as provided by paragraphs (a)(1)(iv) and (a)(1)(v) of the section and unless your source is equipped with a bag leak detection system under §63.1206(c)(8) or a particulate matter detection system under §63.1206(c)(9), you must use a COMS to demonstrate and monitor compliance with the opacity standard under §§63.1220(a)(7) and (b)(7) at each point where emissions are vented from these affected sources including the bypass stack of a preheater or preheater/precalciner kiln with dual stacks.

(C) You must maintain and operate each COMS in accordance with the requirements of §63.8(c) except for the requirements under §63.8(c)(3). The requirements of §63.1211(c) shall be complied with instead of §63.8(c)(3); and

(D) Compliance is based on a six-minute block average.

(iii) You must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under this subpart. However, compliance with the requirements in this section to install, calibrate, maintain and operate the PM CEMS is not required until such time that the Agency promulgates all performance specifications and operational requirements applicable to PM CEMS.

(iv) If you operate a cement kiln subject to the provisions of this subpart and use a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks, you may, in lieu of installing the COMS required by paragraph (a)(1)(ii) of this section, comply with the opacity standard in accordance with the procedures of Method 9 to part 60 of this chapter:

(A) You must conduct the Method 9 test while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day;

(B) The duration of the Method 9 test shall be at least 30 minutes each day;

(C) You must use the Method 9 procedures to monitor and record the average opacity for each six-minute block period during the test; and

(D) To remain in compliance, all six-minute block averages must not exceed the opacity standard.

(v) If you operate a cement kiln subject to the provisions of this subpart and use a particulate matter control device that exhausts through a monovent, or if the use of a COMS in accordance with the installation specification of Performance Specification 1 (PS–1) of appendix B to part 60 of this chapter is not feasible, you may, in lieu of installing the COMS required by paragraph (a)(1)(ii) of this section, comply with the opacity standard in accordance with the procedures of Method 9 to part 60 of this chapter:

(A) You must conduct the Method 9 test while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day;

(B) The duration of the Method 9 test shall be at least 30 minutes each day;

(C) You must use the Method 9 procedures to monitor and record the average opacity for each six-minute block period during the test; and

(D) To remain in compliance, all six-minute block averages must not exceed the opacity standard.

(2) *Performance specifications.* You must install, calibrate, maintain, and continuously operate the CEMS and COMS in compliance with the quality assurance procedures provided in the appendix to this subpart and Performance Specifications 1 (opacity), 4B (carbon monoxide and oxygen), and 8A (hydrocarbons) in appendix B, part 60 of this chapter.

(3) *Carbon monoxide readings exceeding the span.* (i) Except as provided by paragraph (a)(3)(ii) of this section, if a carbon monoxide CEMS detects a response that results in a one-minute average at or above the 3,000 ppmv span level required by Performance Specification 4B in appendix B, part 60 of this chapter, the one-minute average must be recorded as 10,000 ppmv. The one-minute 10,000 ppmv value must be used for calculating the hourly rolling average carbon monoxide level.

(ii) Carbon monoxide CEMS that use a span value of 10,000 ppmv when one-minute carbon monoxide levels are equal to or exceed 3,000 ppmv are not subject to paragraph (a)(3)(i) of this section. Carbon monoxide CEMS that use a span value of 10,000 are subject to the same CEMS performance and equipment specifications when operating in the range of 3,000 ppmv to 10,000 ppmv that are provided by Performance Specification 4B for other carbon monoxide CEMS, except:

(A) Calibration drift must be less than 300 ppmv; and

(B) Calibration error must be less than 500 ppmv.

(4) *Hydrocarbon readings exceeding the span.* (i) Except as provided by paragraph (a)(4)(ii) of this section, if a hydrocarbon CEMS detects a response that results in a one-minute average at or above the 100 ppmv span level required by Performance Specification 8A in appendix B, part 60 of this chapter, the one-minute average must be recorded as 500 ppmv. The one-minute 500 ppmv value must be used for calculating the hourly rolling average HC level.

(ii) Hydrocarbon CEMS that use a span value of 500 ppmv when one-minute hydrocarbon levels are equal to or exceed 100 ppmv are not subject to paragraph (a)(4)(i) of this section. Hydrocarbon CEMS that use a span value of 500 ppmv are subject to the same CEMS performance and equipment specifications when operating in the range of 100 ppmv to 500 ppmv that are provided by Performance Specification 8A for other hydrocarbon CEMS, except:

(A) The zero and high-level calibration gas must have a hydrocarbon level of between 0 and 100 ppmv, and between 250 and 450 ppmv, respectively;

(B) The strip chart recorder, computer, or digital recorder must be capable of recording all readings within the CEM measurement range and must have a resolution of 2.5 ppmv;

(C) The CEMS calibration must not differ by more than ±15 ppmv after each 24-hour period of the seven day test at both zero and high levels;

(D) The calibration error must be no greater than 25 ppmv; and

(E) The zero level, mid-level, and high level calibration gas used to determine calibration error must have a hydrocarbon level of 0–200 ppmv, 150–200 ppmv, and 350–400 ppmv, respectively.

(5) *Petitions to use CEMS for other standards.* You may petition the Administrator to use CEMS for compliance monitoring for particulate matter, mercury, semivolatile metals, low volatile metals, and hydrogen chloride and chlorine gas under §63.8(f) in lieu of compliance with the corresponding operating parameter limits under this section.

(6) *Calculation of rolling averages* —(i) *Calculation of rolling averages initially.* The carbon monoxide or hydrocarbon CEMS must begin recording one-minute average values by 12:01 a.m. and hourly rolling average values by 1:01 a.m., when 60 one-minute values will be available for calculating the initial hourly rolling average for those sources that come into compliance on the regulatory compliance date. Sources that elect to come into compliance before the regulatory compliance date must begin recording one-minute and hourly rolling average values within 60 seconds and 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), respectively, from the time at which compliance begins.

(ii) *Calculation of rolling averages upon intermittent operations.* You must ignore periods of time when one-minute values are not available for calculating the hourly rolling average. When one-minute values become available again, the first one-minute value is added to the previous 59 values to calculate the hourly rolling average.

(iii) *Calculation of rolling averages when the hazardous waste feed is cutoff.* (A) Except as provided by paragraph (a)(6)(iii)(B) of this section, you must continue monitoring carbon monoxide and hydrocarbons when the hazardous waste feed is cutoff if the source is operating. You must not resume feeding hazardous waste if the emission levels exceed the standard.

(B) You are not subject to the CEMS requirements of this subpart during periods of time you meet the requirements of §63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when you are not burning hazardous waste).

(7) *Operating parameter limits for hydrocarbons.* If you elect to comply with the carbon monoxide and hydrocarbon emission standard by continuously monitoring carbon monoxide with a CEMS, you must demonstrate that hydrocarbon emissions during the comprehensive performance test do not exceed the hydrocarbon emissions standard. In addition, the limits you establish on the destruction and removal efficiency (DRE) operating parameters required under paragraph (j) of this section also ensure that you maintain compliance with the hydrocarbon emission standard. If you do not conduct the hydrocarbon demonstration and DRE tests concurrently, you must establish separate operating parameter limits under paragraph (j) of this section based on each test and the more restrictive of the operating parameter limits applies.

(b) *Other continuous monitoring systems (CMS).* (1) You must use CMS (e.g., thermocouples, pressure transducers, flow meters) to document compliance with the applicable operating parameter limits under this section.

(2) Except as specified in paragraphs (b)(2)(i) and (ii) of this section, you must install and operate continuous monitoring systems other than CEMS in conformance with §63.8(c)(3) that requires you, at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system:

(i) *Calibration of thermocouples and pyrometers.* The calibration of thermocouples must be verified at a frequency and in a manner consistent with manufacturer specifications, but no less frequent than once per year. You must operate and maintain optical pyrometers in accordance with manufacturer specifications unless otherwise approved by the Administrator. You must calibrate optical pyrometers in accordance with the frequency and procedures recommended by the manufacturer, but no less frequent than once per year, unless otherwise approved by the Administrator. And,

(ii) *Accuracy and calibration of weight measurement devices for activated carbon injection systems.* If you operate a carbon injection system, the accuracy of the weight measurement device must be ± 1 percent of the weight being measured. The calibration of the device must be verified at least once each calendar quarter at a frequency of approximately 120 days.

(3) CMS must sample the regulated parameter without interruption, and evaluate the detector response at least once each 15 seconds, and compute and record the average values at least every 60 seconds.

(4) The span of the non-CEMS CMS detector must not be exceeded. You must interlock the span limits into the automatic waste feed cutoff system required by §63.1206(c)(3).

(5) *Calculation of rolling averages* —(i) *Calculation of rolling averages initially.* Continuous monitoring systems must begin recording one-minute average values by 12:01 a.m., hourly rolling average values by 1:01 a.m.(e.g., when 60 one-minute values will be available for calculating the initial hourly rolling average), and twelve-hour rolling averages by 12:01 p.m.(e.g., when 720 one-minute averages are available to calculate a 12-hour rolling average), for those sources that come into compliance on the regulatory compliance date. Sources that elect to come into compliance before the regulatory compliance date must begin recording one-minute, hourly rolling average, and 12-hour rolling average values within 60 seconds, 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), and 720 minutes (when 720 one-minute values will be available for calculating the initial 12-hour hourly rolling average) respectively, from the time at which compliance begins.

(ii) *Calculation of rolling averages upon intermittent operations.* You must ignore periods of time when one-minute values are not available for calculating rolling averages. When one-minute values become available again, the first one-minute value is added to the previous one-minute values to calculate rolling averages.

(iii) *Calculation of rolling averages when the hazardous waste feed is cutoff.* (A) Except as provided by paragraph (b)(5)(iii)(B) of this section, you must continue monitoring operating parameter limits with a CMS when the hazardous waste feed is cutoff if the source is operating. You must not resume feeding hazardous waste if an operating parameter exceeds its limit.

(B) You are not subject to the CMS requirements of this subpart during periods of time you meet the requirements of §63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when you are not burning hazardous waste).

(c) *Analysis of feedstreams* —(1) *General.* Prior to feeding the material, you must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits provided by this section.

(2) *Feedstream analysis plan.* You must develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify at a minimum:

(i) The parameters for which you will analyze each feedstream to ensure compliance with the operating parameter limits of this section;

(ii) Whether you will obtain the analysis by performing sampling and analysis or by other methods, such as using analytical information obtained from others or using other published or documented data or information;

(iii) How you will use the analysis to document compliance with applicable feedrate limits (e.g., if you blend hazardous wastes and obtain analyses of the wastes prior to blending but not of the blended, as-fired, waste, the plan must describe how you will determine the pertinent parameters of the blended waste);

(iv) The test methods which you will use to obtain the analyses;

(v) The sampling method which you will use to obtain a representative sample of each feedstream to be analyzed using sampling methods described in appendix IX, part 266 of this chapter, or an equivalent method; and

(vi) The frequency with which you will review or repeat the initial analysis of the feedstream to ensure that the analysis is accurate and up to date.

(3) *Review and approval of analysis plan.* You must submit the feedstream analysis plan to the Administrator for review and approval, if requested.

(4) *Compliance with feedrate limits.* To comply with the applicable feedrate limits of this section, you must monitor and record feedrates as follows:

(i) Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;

(ii) Determine and record the mass or volume flowrate of each feedstream by a CMS. If you determine flowrate of a feedstream by volume, you must determine and record the density of the feedstream by sampling and analysis (unless you report the constituent concentration in units of weight per unit volume (e.g., mg/l)); and

(iii) Calculate and record the mass feedrate of the parameter per unit time.

(5) *Waiver of monitoring of constituents in certain feedstreams.* You are not required to monitor levels of metals or chlorine in the following feedstreams to document compliance with the feedrate limits under this section provided that you document in the comprehensive performance test plan the expected levels of the constituent in the feedstream and account for those assumed feedrate levels in documenting compliance with feedrate limits: natural gas, process air, and feedstreams from vapor recovery systems.

(d) *Performance evaluations.* (1) The requirements of §§63.8(d) (Quality control program) and (e) (Performance evaluation of continuous monitoring systems) apply, except that you must conduct performance evaluations of components of the CMS under the frequency and procedures (for example, submittal of performance evaluation test plan for review and approval) applicable to performance tests as provided by §63.1207.

(2) You must comply with the quality assurance procedures for CEMS prescribed in the appendix to this subpart.

(e) *Conduct of monitoring.* The provisions of §63.8(b) apply.

(f) *Operation and maintenance of continuous monitoring systems.* The provisions of §63.8(c) apply except:

(1) *Section 63.8(c)(3).* The requirements of §63.1211(c), that requires CMSs to be installed, calibrated, and operational on the compliance date, shall be complied with instead of section 63.8(c)(3);

(2) *Section 63.8(c)(4)(ii).* The performance specifications for carbon monoxide, hydrocarbon, and oxygen CEMSs in subpart B, part 60 of this chapter that requires detectors to measure the sample concentration at least once every 15 seconds for calculating an average emission rate once every 60 seconds shall be complied with instead of section 63.8(c)(4)(ii); and

(3) Sections 63.8(c)(4)(i), (c)(5), and (c)(7)(i)(C) pertaining to COMS apply only to owners and operators of hazardous waste burning cement kilns.

(g) *Alternative monitoring requirements other than continuous emissions monitoring systems (CEMS)* —(1) *Requests to use alternatives to operating parameter monitoring requirements.* (i) You may submit an application to the Administrator under this paragraph for approval of alternative operating parameter monitoring requirements to document compliance with the emission standards of this subpart. For requests to use additional CEMS, however, you must use paragraph (a)(5) of this section and §63.8(f). Alternative requests to operating parameter monitoring requirements that include unproven monitoring methods may not be made under this paragraph and must be made under §63.8(f).

(ii) You may submit an application to waive an operating parameter limit specified in this section based on documentation that neither that operating parameter limit nor an alternative operating parameter limit is needed to ensure compliance with the emission standards of this subpart.

(iii) You must comply with the following procedures for applications submitted under paragraphs (g)(1)(i) and (ii) of this section:

(A) *Timing of the application.* You must submit the application to the Administrator not later than with the comprehensive performance test plan.

(B) *Content of the application.* You must include in the application:

(*1*) Data or information justifying your request for an alternative monitoring requirement (or for a waiver of an operating parameter limit), such as the technical or economic infeasibility or the impracticality of using the required approach;

(*2*) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach/technique (e.g., type of detector, monitoring location), the averaging period for the limit, and how the limit is to be calculated; and

(*3*) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard, or that it is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable.

(C) *Approval of request to use an alternative monitoring requirement or waive an operating parameter limit.* The Administrator will notify you of approval or intention to deny approval of the request within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information that you submit. The Administrator will not approve an alternative monitoring request unless the alternative monitoring requirement provides equivalent or better assurance of compliance with the relevant emission standard, or is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable. Before disapproving any request, the Administrator will notify you of the Administrator's intention to disapprove the request together with:

(*1*) Notice of the information and findings on which the intended disapproval is based; and

(*2*) Notice of opportunity for you to present additional information to the Administrator before final action on the request. At the time the Administrator notifies you of intention to disapprove the request, the Administrator will specify how much time you will have after being notified of the intended disapproval to submit the additional information.

(D) *Responsibility of owners and operators.* You are responsible for ensuring that you submit any supplementary and additional information supporting your application in a timely manner to enable the Administrator to consider your application during review of the comprehensive performance test plan. Neither your submittal of an application, nor the Administrator's failure to approve or disapprove the application, relieves you of the responsibility to comply with the provisions of this subpart.

(iv) *Dual standards that incorporate the interim standards for HAP metals* —(A) *Semivolatile and low volatile metals.* You may petition the Administrator to waive a feedrate operating parameter limit under paragraph (n)(2) of this section for either the emission standards expressed in a thermal emissions format or the interim standards based on documentation that the feedrate operating parameter limit is not needed to ensure compliance with the relevant standard on a continuous basis.

(B) *Mercury.* You may petition the Administrator to waive a feedrate operating parameter limit under paragraph (l)(1) of this section for either the feed concentration standard under §§63.1220(a)(2)(i) and (b)(2)(i) or the interim standards based on documentation that the feedrate operating parameter limit is not needed to ensure compliance with the relevant standard on a continuous basis.

(2) *Administrator's discretion to specify additional or alternative requirements.* The Administrator may determine on a case-by-case basis at any time (e.g., during review of the comprehensive performance test plan, during compliance certification review) that you may need to limit additional or alternative operating parameters (e.g., opacity in addition to or in lieu of operating parameter limits on the particulate matter control device) or that alternative approaches to establish limits on operating parameters may be necessary to document compliance with the emission standards of this subpart.

(h) *Reduction of monitoring data.* The provisions of §63.8(g) apply.

(i) *When an operating parameter is applicable to multiple standards.* Paragraphs (j) through (p) of this section require you to establish limits on operating parameters based on comprehensive performance testing to ensure you maintain compliance with the emission standards of this subpart. For several parameters, you must establish a limit for the parameter to ensure compliance with more than one emission standard. An example is a limit on minimum combustion chamber temperature to ensure compliance with both the DRE standard of paragraph (j) of this section and the dioxin/furan standard of paragraph (k) of this section. If the performance tests for such standards are not performed simultaneously, the most stringent limit for a parameter derived from independent performance tests applies.

(j) *DRE.* To remain in compliance with the destruction and removal efficiency (DRE) standard, you must establish operating limits during the comprehensive performance test (or during a previous DRE test under provisions of §63.1206(b)(7)) for the following parameters, unless the limits are based on manufacturer specifications, and comply with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated):

(1) *Minimum combustion chamber temperature.* (i) You must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under §63.1207(e);

(ii) You must establish a minimum hourly rolling average limit as the average of the test run averages;

(2) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(3) *Maximum hazardous waste feedrate.* (i) You must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste feedrate for each location where hazardous waste is fed.

(ii) You must establish the limits as the average of the maximum hourly rolling averages for each run.

(iii) You must comply with the feedrate limit(s) on a hourly rolling average basis;

(4) *Operation of waste firing system.* You must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained.

(k) *Dioxins and furans.* You must comply with the dioxin and furans emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Gas temperature at the inlet to a dry particulate matter control device.* (i) For sources other than a lightweight aggregate kiln, if the combustor is equipped with an electrostatic precipitator, baghouse (fabric filter), or other dry emissions control device where particulate matter is suspended in contact with combustion gas, you must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. You must establish the hourly rolling average limit as the average of the test run averages.

(ii) For hazardous waste burning lightweight aggregate kilns, you must establish a limit on the maximum temperature of the gas at the exit of the (last) combustion chamber (or exit of any waste heat recovery system) on an hourly rolling average. The limit must be established as the average of the test run averages;

(2) *Minimum combustion chamber temperature.* (i) For sources other than cement kilns, you must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. You must document the temperature measurement location in the test plan you submit under §§63.1207(e) and (f);

(ii) You must establish a minimum hourly rolling average limit as the average of the test run averages.

(3) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(4) *Maximum hazardous waste feedrate.* (i) You must establish limits on the maximum pumpable and total (pumpable and nonpumpable) hazardous waste feedrate for each location where waste is fed.

(ii) You must establish the limits as the average of the maximum hourly rolling averages for each run.

(iii) You must comply with the feedrate limit(s) on a hourly rolling average basis;

(5) *Particulate matter operating limit.* If your combustor is equipped with an activated carbon injection system, you must establish operating parameter limits on the particulate matter control device as specified by paragraph (m)(1) of this section;

(6) *Activated carbon injection parameter limits.* If your combustor is equipped with an activated carbon injection system:

(i) *Carbon feedrate.* You must establish a limit on minimum carbon injection rate on an hourly rolling average calculated as the average of the test run averages. If your carbon injection system injects carbon at more than one location, you must establish a carbon feedrate limit for each location.

(ii) *Carrier fluid.* You must establish a limit on minimum carrier fluid (gas or liquid) flowrate or pressure drop as an hourly rolling average based on the manufacturer's specifications. You must document the specifications in the test plan you submit under §§63.1207(e) and (f);

(iii) *Carbon specification.* (A) You must specify and use the brand (i.e., manufacturer) and type of carbon used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the carbon used in the performance test.

(B) You may substitute at any time a different brand or type of carbon provided that the replacement has equivalent or improved properties compared to the carbon used in the performance test and conforms to the key sorbent parameters you identify under paragraph (k)(6)(iii)(A) of this section. You must include in the operating record documentation that the substitute carbon will provide the same level of control as the original carbon.

(7) *Carbon bed parameter limits.* If your combustor is equipped with a carbon bed system:

(i) *Monitoring bed life.* You must:

(A) Monitor performance of the carbon bed consistent with manufacturer's specifications and recommendations to ensure the carbon bed (or bed segment for sources with multiple segments) has not reached the end of its useful life to minimize dioxin/furan and mercury emissions at least to the levels required by the emission standards;

(B) Document the monitoring procedures in the operation and maintenance plan;

(C) Record results of the performance monitoring in the operating record; and

(D) Replace the bed or bed segment before it has reached the end of its useful life to minimize dioxin/furan and mercury emissions at least to the levels required by the emission standards.

(ii) *Carbon specification.* (A) You must specify and use the brand (i.e., manufacturer) and type of carbon used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the carbon used in the performance test.

(B) You may substitute at any time a different brand or type of carbon provided that the replacement has equivalent or improved properties compared to the carbon used in the performance test. You must include in the operating record documentation that the substitute carbon will provide an equivalent or improved level of control as the original carbon.

(iii) *Maximum temperature.* You must measure the temperature of the carbon bed at either the bed inlet or exit and you must establish a maximum temperature limit on an hourly rolling average as the average of the test run averages.

(8) *Catalytic oxidizer parameter limits.* If your combustor is equipped with a catalytic oxidizer, you must establish limits on the following parameters:

(i) *Minimum flue gas temperature at the entrance of the catalyst.* You must establish a limit on minimum flue gas temperature at the entrance of the catalyst on an hourly rolling average as the average of the test run averages.

(ii) *Maximum time in-use.* You must replace a catalytic oxidizer with a new catalytic oxidizer when it has reached the maximum service time specified by the manufacturer.

(iii) *Catalyst replacement specifications.* When you replace a catalyst with a new one, the new catalyst must be equivalent to or better than the one used during the previous comprehensive test, as measured by:

(A) Catalytic metal loading for each metal;

(B) Space time, expressed in the units s^{-1}, the maximum rated volumetric flow of combustion gas through the catalyst divided by the volume of the catalyst; and

(C) Substrate construction, including materials of construction, washcoat type, and pore density.

(iv) *Maximum flue gas temperature.* You must establish a maximum flue gas temperature limit at the entrance of the catalyst as an hourly rolling average, based on manufacturer's specifications.

(9) *Inhibitor feedrate parameter limits.* If you feed a dioxin/furan inhibitor into the combustion system, you must establish limits for the following parameters:

(i) *Minimum inhibitor feedrate.* You must establish a limit on minimum inhibitor feedrate on an hourly rolling average as the average of the test run averages.

(ii) *Inhibitor specifications.* (A) You must specify and use the brand (i.e., manufacturer) and type of inhibitor used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§63.1207(e) and (f) key parameters that affect the effectiveness of the inhibitor and establish limits on those parameters based on the inhibitor used in the performance test.

(B) You may substitute at any time a different brand or type of inhibitor provided that the replacement has equivalent or improved properties compared to the inhibitor used in the performance test and conforms to the key parameters you identify under paragraph (k)(9)(ii)(A) of this section. You must include in the operating record documentation that the substitute inhibitor will provide the same level of control as the original inhibitor.

(l) *Mercury.* You must comply with the mercury emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Feedrate of mercury.* (i) For incinerators and solid fuel boilers, when complying with the mercury emission standards under §§63.1203, 63.1216 and 63.1219, you must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages.

(ii) For liquid fuel boilers, when complying with the mercury emission standards of §63.1217, you must establish a rolling average limit for the mercury feedrate as follows on an averaging period not to exceed an annual rolling average:

(A) You must calculate a mercury system removal efficiency for each test run and calculate the average system removal efficiency of the test run averages. If emissions exceed the mercury emission standard during the comprehensive performance test, it is not a violation because the averaging period for the mercury emission standard is (not-to-exceed) one year and compliance is based on compliance with the mercury feedrate limit with an averaging period not-to-exceed one year.

(B) If you burn hazardous waste with a heating value of 10,000 Btu/lb or greater, you must calculate the mercury feedrate limit as follows:

(*1*) The mercury feedrate limit is the emission standard divided by [1 − system removal efficiency].

(*2*) The mercury feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of mercury in hazardous waste feedstreams per million Btu of hazardous waste fired.

(*3*) You must comply with the hazardous waste mercury thermal concentration limit by determining the feedrate of mercury in all hazardous waste feedstreams (lb/hr) at least once a minute and the hazardous waste thermal feedrate (MM Btu/hr) at least once a minute to calculate a 60-minute average thermal emission concentration as [hazardous waste mercury feedrate (lb/hr) / hazardous waste thermal feedrate (MM Btu/hr)].

(*4*) You must calculate a rolling average hazardous waste mercury thermal concentration that is updated each hour.

(*5*) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. Thereafter, you must calculate rolling averages using either one-minute or one-hour updates. Hourly updates shall be calculated using the average of the one-minute average data for the preceding hour. For the period beginning with initial operation under this standard until the source has operated for the full averaging period that you select, the average feedrate shall be based only on actual operation under this standard.

(C) If you burn hazardous waste with a heating value of less than 10,000 Btu/lb, you must calculate the mercury feedrate limit as follows:

(*1*) You must calculate the mercury feedrate limit as the mercury emission standard divided by [1 − System Removal Efficiency].

(*2*) The feedrate limit is expressed as a mass concentration per unit volume of stack gas (µgm/dscm) and is converted to a mass feedrate (lb/hr) by multiplying it by the average stack gas flowrate of the test run averages.

(*3*) You must comply with the feedrate limit by determining the mercury feedrate (lb/hr) at least once a minute to calculate a 60-minute average feedrate.

(*4*) You must update the rolling average feedrate each hour with this 60-minute feedrate measurement.

(*5*) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. Thereafter, you must calculate rolling averages using either one-minute or one-hour updates. Hourly updates shall be calculated using the average of the one-minute average data for the preceding hour. For the period beginning with initial operation under this standard until the source has operated for the full averaging period that you select, the average feedrate shall be based only on actual operation under this standard.

(D) If your boiler is equipped with a wet scrubber, you must comply with the following unless you document in the performance test plan that you do not feed chlorine at rates that may substantially affect the system removal efficiency of mercury for purposes of establishing a mercury feedrate limit based on the system removal efficiency during the test:

(*1*) Scrubber blowdown must be minimized during a pretest conditioning period and during the performance test:

(*2*) Scrubber water must be preconditioned so that mercury in the water is at equilibrium with stack gas at the mercury feedrate level of the performance test; and

(*3*) You must establish an operating limit on minimum pH of scrubber water as the average of the test run averages and comply with the limit on an hourly rolling average.

(iii) For cement kilns:

(A) When complying with the emission standards under §§63.1220(a)(2)(i) and (b)(2)(i), you must:

(*1*) Comply with the mercury hazardous waste feed concentration operating requirement on a twelve-hour rolling average;

(*2*) Monitor and record in the operating record the as-fired mercury concentration in the hazardous waste (or the weighted-average mercury concentration for multiple hazardous waste feedstreams);

(*3*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when the as-fired mercury concentration operating requirement is exceeded;

(B) When complying with the emission standards under §§63.1204 and 63.1220(a)(2)(ii)(A) and (b)(2)(ii)(A), you must establish a 12-hour rolling average limit for the feedrate of mercury in all feedstreams as the average of the test run averages;

(C) Except as provided by paragraph (l)(1)(iii)(D) of this section, when complying with the hazardous waste maximum theoretical emission concentration (MTEC) under §63.1220(a)(2)(ii)(B) and (b)(2)(ii)(B), you must:

(*1*) Comply with the MTEC operating requirement on a twelve-hour rolling average;

(*2*) Monitor and record the feedrate of mercury for each hazardous waste feedstream according to §63.1209(c);

(*3*) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate);

(*4*) Continuously calculate and record in the operating record a MTEC assuming mercury from all hazardous waste feedstreams is emitted;

(*5*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when the MTEC operating requirement is exceeded;

(D) In lieu of complying with paragraph (l)(1)(iii)(C) of this section, you may:

(*1*) Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury from all hazardous waste feedstreams that ensures the MTEC calculated in paragraph (l)(1)(iii)(C)(*4*) of this section is below the operating requirement under paragraphs §§63.1220(a)(2)(ii)(B) and (b)(2)(ii)(B); and

(*2*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when either the gas flowrate or mercury feedrate exceeds the limits identified in paragraph (l)(1)(iii)(D)(*1*) of this section.

(iv) For lightweight aggregate kilns:

(A) When complying with the emission standards under §§63.1205, 63.1221(a)(2)(i) and (b)(2)(i), you must establish a 12-hour rolling average limit for the total feedrate of mercury in all feedstreams as the average of the test run averages;

(B) Except as provided by paragraph (l)(1)(iv)(C) of this section, when complying with the hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) under §§63.1221(a)(2)(ii) and (b)(2)(ii), you must:

(*1*) Comply with the MTEC operating requirement on a twelve-hour rolling average;

(*2*) Monitor and record the feedrate of mercury for each hazardous waste feedstream according to §63.1209(c);

(*3*) Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that you have correlated to gas flowrate);

(*4*) Continuously calculate and record in the operating record a MTEC assuming mercury from all hazardous waste feedstreams is emitted;

(*5*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when the MTEC operating requirement is exceeded;

(C) In lieu of complying with paragraph (l)(1)(iv)(B) of this section, you may:

(*1*) Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum feedrate limit of mercury from all hazardous waste feedstreams that ensures the MTEC calculated in paragraph (l)(1)(iv)(B)(*4*) of this section is below the operating requirement under paragraphs §§63.1221(a)(2)(ii) and (b)(2)(ii); and

(*2*) Initiate an automatic waste feed cutoff that immediately and automatically cuts off the hazardous waste feed when either the gas flowrate or mercury feedrate exceeds the limits identified in paragraph (l)(1)(iv)(C)(*1*) of this section.

(v) *Extrapolation of feedrate levels.* In lieu of establishing mercury feedrate limits as specified in paragraphs (l)(1)(i) through (iv) of this section, you may request as part of the performance test plan under §§63.7(b) and (c) and §§63.1207 (e) and (f) to use the mercury feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether:

(A) Performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and

(B) Whether the extrapolated feedrates you request are warranted considering historical metal feedrate data.

(2) *Wet scrubber.* If your combustor is equipped with a wet scrubber, you must establish operating parameter limits prescribed by paragraph (o)(3) of this section, except for paragraph (o)(3)(iv).

(3) *Activated carbon injection.* If your combustor is equipped with an activated carbon injection system, you must establish operating parameter limits prescribed by paragraphs (k)(5) and (k)(6) of this section.

(4) *Activated carbon bed.* If your combustor is equipped with an activated carbon bed system, you must comply with the requirements of (k)(7) of this section to assure compliance with the mercury emission standard.

(m) *Particulate matter.* You must comply with the particulate matter emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Control device operating parameter limits (OPLs)* —(i) *Wet scrubbers.* For sources equipped with wet scrubbers, including ionizing wet scrubbers, high energy wet scrubbers such as venturi, hydrosonic, collision, or free jet wet scrubbers, and low energy wet scrubbers such as spray towers, packed beds, or tray towers, you must establish limits on the following parameters:

(A) For high energy scrubbers only, minimum pressure drop across the wet scrubber on an hourly rolling average, established as the average of the test run averages;

(B) For all wet scrubbers:

(*1*) To ensure that the solids content of the scrubber liquid does not exceed levels during the performance test, you must either:

(*i*) Establish a limit on solids content of the scrubber liquid using a CMS or by manual sampling and analysis. If you elect to monitor solids content manually, you must sample and analyze the scrubber liquid hourly unless you support an alternative monitoring frequency in the performance test plan that you submit for review and approval; or

(*ii*) Establish a minimum blowdown rate using a CMS and either a minimum scrubber tank volume or liquid level using a CMS.

(*2*) For maximum solids content monitored with a CMS, you must establish a limit on a twelve-hour rolling average as the average of the test run averages.

(*3*) For maximum solids content measured manually, you must establish an hourly limit, as measured at least once per hour, unless you support an alternative monitoring frequency in the performance test plan that you submit for review and approval. You must establish the maximum hourly limit as the average of the manual measurement averages for each run.

(*4*) For minimum blowdown rate and either a minimum scrubber tank volume or liquid level using a CMS, you must establish a limit on an hourly rolling average as the average of the test run averages.

(C) For high energy wet scrubbers only, you must establish limits on either the minimum liquid to gas ratio or the minimum scrubber water flowrate and maximum flue gas flowrate on an hourly rolling average. If you establish limits on maximum flue gas flowrate under this paragraph, you need not establish a limit on maximum flue gas flowrate under paragraph (m)(2) of this section. You must establish these hourly rolling average limits as the average of the test run averages; and

(ii)–(iii) [Reserved]

(iv) *Other particulate matter control devices.* For each particulate matter control device that is not a fabric filter or high energy wet scrubber, or is not an electrostatic precipitator or ionizing wet scrubber for which you elect to monitor particulate matter loadings under §63.1206(c)(9) of this chapter for process control, you must ensure that the control device is properly operated and maintained as required by §63.1206(c)(7) and by monitoring the operation of the control device as follows:

(A) During each comprehensive performance test conducted to demonstrate compliance with the particulate matter emissions standard, you must establish a range of operating values for the control device that is a representative and reliable indicator that the control device is operating within the same range of conditions as during the performance test. You must establish this range of operating values as follows:

(*1*) You must select a set of operating parameters appropriate for the control device design that you determine to be a representative and reliable indicator of the control device performance.

(*2*) You must measure and record values for each of the selected operating parameters during each test run of the performance test. A value for each selected parameter must be recorded using a continuous monitor.

(*3*) For each selected operating parameter measured in accordance with the requirements of paragraph (m)(1)(iv)(A)(*1*) of this section, you must establish a minimum operating parameter limit or a maximum operating parameter limit, as appropriate for the parameter, to define the operating limits within which the control device can operate and still continuously achieve the same operating conditions as during the performance test.

(*4*) You must prepare written documentation to support the operating parameter limits established for the control device and you must include this documentation in the performance test plan that you submit for review and approval. This documentation must include a description for each selected parameter and the operating range and monitoring frequency required to ensure the control device is being properly operated and maintained.

(B) You must install, calibrate, operate, and maintain a monitoring device equipped with a recorder to measure the values for each operating parameter selected in accordance with the requirements of paragraph (m)(1)(iv)(A)(*1*) of this section. You must install, calibrate, and maintain the monitoring equipment in accordance with the equipment manufacturer's specifications. The recorder must record the detector responses at least every 60 seconds, as required in the definition of continuous monitor.

(C) You must regularly inspect the data recorded by the operating parameter monitoring system at a sufficient frequency to ensure the control device is operating properly. An excursion is determined to have occurred any time that the actual value of a selected operating parameter is less than the minimum operating limit (or, if applicable, greater than the maximum operating limit) established for the parameter in accordance with the requirements of paragraph (m)(1)(iv)(A)(3) of this section.

(D) Operating parameters selected in accordance with paragraph (m)(1)(iv) of this section may be based on manufacturer specifications provided you support the use of manufacturer specifications in the performance test plan that you submit for review and approval.

(2) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(3) *Maximum ash feedrate.* Owners and operators of hazardous waste incinerators, solid fuel boilers, and liquid fuel boilers must establish a maximum ash feedrate limit as a 12-hour rolling average based on the average of the test run averages. This requirement is waived, however, if you comply with the particulate matter detection system requirements under §63.1206(c)(9).

(n) *Semivolatile metals and low volatility metals.* You must comply with the semivolatile metal (cadmium and lead) and low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Maximum inlet temperature to dry particulate matter air pollution control device.* You must establish a limit on the maximum inlet temperature to the primary dry metals emissions control device (e.g., electrostatic precipitator, baghouse) on an hourly rolling average basis as the average of the test run averages.

(2) *Maximum feedrate of semivolatile and low volatile metals* —(i) *General.* You must establish feedrate limits for semivolatile metals (cadmium and lead) and low volatile metals (arsenic, beryllium, and chromium) as follows, except as provided by paragraph (n)(2)(vii) of this section.

(ii) For incinerators, cement kilns, and lightweight aggregate kilns, when complying with the emission standards under §§63.1203, 63.1204, 63.1205, and 63.1219, and for solid fuel boilers when complying with the emission standards under §63.1216, you must establish 12-hour rolling average limits for the total feedrate of semivolatile and low volatile metals in all feedstreams as the average of the test run averages.

(iii) *Cement kilns under §63.1220.* (A) When complying with the emission standards under §63.1220(a)(3)(i), (a)(4)(i), (b)(3)(i), and (b)(4)(i), you must establish 12-hour rolling average feedrate limits for semivolatile and low volatile metals as the thermal concentration of semivolatile metals or low volatile metals in all hazardous waste feedstreams. You must calculate hazardous waste thermal concentrations for semivolatile metals and low volatile metals for each run as the total mass feedrate of semivolatile metals or low volatile metals for all hazardous waste feedstreams divided by the total heat input rate for all hazardous waste feedstreams. The 12-hour rolling average feedrate limits for semivolatile metals and low volatile metals are the average of the test run averages, calculated on a thermal concentration basis, for all hazardous waste feeds.

(B) When complying with the emission standards under §§63.1220(a)(3)(ii), (a)(4)(ii), (b)(3)(ii), and (b)(4)(ii), you must establish 12-hour rolling average limits for the total feedrate of semivolatile and low volatile metals in all feedstreams as the average of the test run averages.

(iv) *Lightweight aggregate kilns under §63.1221.* (A) When complying with the emission standards under §§63.1221(a)(3)(i), (a)(4)(i), (b)(3)(i), and (b)(4)(i), you must establish 12-hour rolling average feedrate limits for

semivolatile and low volatile metals as the thermal concentration of semivolatile metals or low volatile metals in all hazardous waste feedstreams as specified in paragraphs (n)(2)(iii)(A) of this section.

(B) When complying with the emission standards under §§63.1221(a)(3)(ii), (a)(4)(ii), (b)(3)(ii), and (b)(4)(ii), you must establish 12-hour rolling average limits for the total feedrate of semivolatile and low volatile metals in all feedstreams as the average of the test run averages.

(v) *Liquid fuel boilers under §63.1217* —(A) *Semivolatile metals.* You must establish a rolling average limit for the semivolatile metal feedrate as follows on an averaging period not to exceed an annual rolling average.

(*1*) *System removal efficiency.* You must calculate a semivolatile metal system removal efficiency for each test run and calculate the average system removal efficiency of the test run averages. If emissions exceed the semivolatile metal emission standard during the comprehensive performance test, it is not a violation because the averaging period for the semivolatile metal emission standard is one year and compliance is based on compliance with the semivolatile metal feedrate limit that has an averaging period not to exceed an annual rolling average.

(*2*) *Boilers that feed hazardous waste with a heating value of 10,000 Btu/lb or greater.* You must calculate the semivolatile metal feedrate limit as the semivolatile metal emission standard divided by [1 − System Removal Efficiency].

(*i*) The feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of semivolatile metals in all hazardous waste feedstreams per million Btu of hazardous waste fed to the boiler.

(*ii*) You must comply with the hazardous waste semivolatile metal thermal concentration limit by determining the feedrate of semivolatile metal in all hazardous waste feedstreams (lb/hr) and the hazardous waste thermal feedrate (MM Btu/hr) at least once a minute to calculate a 60-minute average thermal emission concentration as [hazardous waste semivolatile metal feedrate (lb/hr) / hazardous waste thermal feedrate (MM Btu/hr)].

(*iii*) You must calculate a rolling average hazardous waste semivolatile metal thermal concentration that is updated each hour.

(*iv*) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. Thereafter, you must calculate rolling averages using either one-minute or one-hour updates. Hourly updates shall be calculated using the average of the one-minute average data for the preceding hour. For the period beginning with initial operation under this standard until the source has operated for the full averaging period that you select, the average feedrate shall be based only on actual operation under this standard.

(*3*) *Boilers that feed hazardous waste with a heating value less than 10,000 Btu/lb.* (*i*) You must calculate the semivolatile metal feedrate limit as the semivolatile metal emission standard divided by [1 − System Removal Efficiency].

(*ii*) The feedrate limit is expressed as a mass concentration per unit volume of stack gas (µgm/dscm) and is converted to a mass feedrate (lb/hr) by multiplying it by the average stack gas flowrate (dscm/hr) of the test run averages.

(*iii*) You must comply with the feedrate limit by determining the semivolatile metal feedrate (lb/hr) at least once a minute to calculate a 60-minute average feedrate.

(*iv*) You must update the rolling average feedrate each hour with this 60-minute feedrate measurement.

(*v*) If you select an averaging period for the feedrate limit that is greater than a 12-hour rolling average, you must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. Thereafter, you must calculate rolling averages using either one-minute or one-hour updates. Hourly updates shall be calculated using the average of the one-minute average data for the preceding hour. For the period beginning with initial operation under this standard until the source has operated for the full averaging period that you select, the average feedrate shall be based only on actual operation under this standard.

(B) *Chromium* —(*1*) *Boilers that feed hazardous waste with a heating value of 10,000 Btu/lb or greater.* (*i*) The 12-hour rolling average feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of

chromium in all hazardous waste feedstreams per million Btu of hazardous waste fed to the boiler. You must establish the 12-hour rolling average feedrate limit as the average of the test run averages.

(*ii*) You must comply with the hazardous waste chromium thermal concentration limit by determining the feedrate of chromium in all hazardous waste feedstreams (lb/hr) and the hazardous waste thermal feedrate (MMBtu/hr) at least once each minute as [hazardous waste chromium feedrate (lb/hr)/hazardous waste thermal feedrate (MMBtu/hr)].

(*2*) *Boilers that feed hazardous waste with a heating value less than 10,000 Btu/lb.* You must establish a 12-hour rolling average limit for the total feedrate (lb/hr) of chromium in all feedstreams as the average of the test run averages.

(vi) *LVM limits for pumpable wastes.* You must establish separate feedrate limits for low volatile metals in pumpable feedstreams using the procedures prescribed above for total low volatile metals. Dual feedrate limits for both pumpable and total feedstreams are not required, however, if you base the total feedrate limit solely on the feedrate of pumpable feedstreams.

(vii) *Extrapolation of feedrate levels.* In lieu of establishing feedrate limits as specified in paragraphs (n)(2)(ii) through (vi) of this section, you may request as part of the performance test plan under §§63.7(b) and (c) and §§63.1207(e) and (f) to use the semivolatile metal and low volatile metal feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates. The extrapolation methodology will be reviewed and approved, as warranted, by the Administrator. The review will consider in particular whether:

(A) Performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and

(B) Whether the extrapolated feedrates you request are warranted considering historical metal feedrate data.

(3) *Control device operating parameter limits (OPLs).* You must establish operating parameter limits on the particulate matter control device as specified by paragraph (m)(1) of this section;

(4) *Maximum total chlorine and chloride feedrate.* You must establish a 12-hour rolling average limit for the feedrate of total chlorine and chloride in all feedstreams as the average of the test run averages.

(5) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis.

(o) *Hydrogen chloride and chlorine gas.* You must comply with the hydrogen chloride and chlorine gas emission standard by establishing and complying with the following operating parameter limits. You must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

(1) *Feedrate of total chlorine and chloride* —(i) *Incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, and hydrochloric acid production furnaces.* You must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the test run averages.

(ii) *Liquid fuel boilers* —(A) *Boilers that feed hazardous waste with a heating value not less than 10,000 Btu/lb.* (*1*) The feedrate limit is a hazardous waste thermal concentration limit expressed as pounds of chlorine (organic and inorganic) in all hazardous waste feedstreams per million Btu of hazardous waste fed to the boiler.

(*2*) You must establish a 12-hour rolling average feedrate limit as the average of the test run averages.

(*3*) You must comply with the feedrate limit by determining the mass feedrate of hazardous waste feedstreams (lb/hr) at least once a minute and by knowing the chlorine content (organic and inorganic, lb of chlorine/lb of hazardous waste) and heating value (Btu/lb) of hazardous waste feedstreams at all times to calculate a 1-minute average feedrate measurement as [hazardous waste chlorine content (lb of chlorine/lb of hazardous waste

feed)/hazardous waste heating value (Btu/lb of hazardous waste)]. You must update the rolling average feedrate each hour with this 60-minute average feedrate measurement.

(B) *Boilers that feed hazardous waste with a heating value less than 10,000 Btu/lb.* You must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the test run averages. You must update the rolling average feedrate each hour with a 60-minute average feedrate measurement.

(2) *Maximum flue gas flowrate or production rate.* (i) As an indicator of gas residence time in the control device, you must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that you document in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.

(ii) You must comply with this limit on a hourly rolling average basis;

(3) *Wet scrubber.* If your combustor is equipped with a wet scrubber:

(i) If your source is equipped with a high energy wet scrubber such as a venturi, hydrosonic, collision, or free jet wet scrubber, you must establish a limit on minimum pressure drop across the wet scrubber on an hourly rolling average as the average of the test run averages;

(ii) If your source is equipped with a low energy wet scrubber such as a spray tower, packed bed, or tray tower, you must establish a minimum pressure drop across the wet scrubber based on manufacturer's specifications. You must comply with the limit on an hourly rolling average;

(iii) If your source is equipped with a low energy wet scrubber, you must establish a limit on minimum liquid feed pressure to the wet scrubber based on manufacturer's specifications. You must comply with the limit on an hourly rolling average;

(iv) You must establish a limit on minimum pH on an hourly rolling average as the average of the test run averages;

(v) You must establish limits on either the minimum liquid to gas ratio or the minimum scrubber water flowrate and maximum flue gas flowrate on an hourly rolling average as the average of the test run averages. If you establish limits on maximum flue gas flowrate under this paragraph, you need not establish a limit on maximum flue gas flowrate under paragraph (o)(2) of this section; and

(4) *Dry scrubber.* If your combustor is equipped with a dry scrubber, you must establish the following operating parameter limits:

(i) *Minimum sorbent feedrate.* You must establish a limit on minimum sorbent feedrate on an hourly rolling average as the average of the test run averages.

(ii) *Minimum carrier fluid flowrate or nozzle pressure drop.* You must establish a limit on minimum carrier fluid (gas or liquid) flowrate or nozzle pressure drop based on manufacturer's specifications.

(iii) *Sorbent specifications.* (A) You must specify and use the brand (i.e., manufacturer) and type of sorbent used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under §§63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the sorbent used in the performance test.

(B) You may substitute at any time a different brand or type of sorbent provided that the replacement has equivalent or improved properties compared to the sorbent used in the performance test and conforms to the key sorbent parameters you identify under paragraph (o)(4)(iii)(A) of this section. You must record in the operating record documentation that the substitute sorbent will provide the same level of control as the original sorbent.

(p) *Maximum combustion chamber pressure.* If you comply with the requirements for combustion system leaks under §63.1206(c)(5) by maintaining the maximum combustion chamber zone pressure lower than ambient pressure to prevent combustion systems leaks from hazardous waste combustion, you must perform instantaneous monitoring of pressure and the automatic waste feed cutoff system must be engaged when negative pressure is not adequately maintained.

(q) *Operating under different modes of operation.* If you operate under different modes of operation, you must establish operating parameter limits for each mode. You must document in the operating record when you change a mode of operation and begin complying with the operating limits for an alternative mode of operation.

(1) *Operating under otherwise applicable standards after the hazardous waste residence time has transpired.* As provided by §63.1206(b)(1)(ii), you may operate under otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act in lieu of the substantive requirements of this subpart.

(i) The otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act are applicable requirements under this subpart.

(ii) You must specify (e.g., by reference) the otherwise applicable requirements as a mode of operation in your Documentation of Compliance under §63.1211(c), your Notification of Compliance under §63.1207(j), and your title V permit application. These requirements include the otherwise applicable requirements governing emission standards, monitoring and compliance, and notification, reporting, and recordkeeping.

(2) *Calculating rolling averages under different modes of operation.* When you transition to a different mode of operation, you must calculate rolling averages as follows:

(i) *Retrieval approach.* Calculate rolling averages anew using the continuous monitoring system values previously recorded for that mode of operation (i.e., you ignore continuous monitoring system values subsequently recorded under other modes of operation when you transition back to a mode of operation); or

(ii) *Start anew.* Calculate rolling averages anew without considering previous recordings.

(A) Rolling averages must be calculated as the average of the available one-minute values for the parameter until enough one-minute values are available to calculate hourly or 12-hour rolling averages, whichever is applicable to the parameter.

(B) You may not transition to a new mode of operation using this approach if the most recent operation in that mode resulted in an exceedance of an applicable emission standard measured with a CEMS or operating parameter limit prior to the hazardous waste residence time expiring; or

(iii) *Seamless transition.* Continue calculating rolling averages using data from the previous operating mode provided that both the operating limit and the averaging period for the parameter are the same for both modes of operation.

(r) *Averaging periods.* The averaging periods specified in this section for operating parameters are not-to-exceed averaging periods. You may elect to use shorter averaging periods. For example, you may elect to use a 1-hour rolling average rather than the 12-hour rolling average specified in paragraph (l)(1)(i) of this section for mercury.

[64 FR 53038, Sept. 30, 1999, as amended at 65 FR 42300, July 10, 2000; 65 FR 67271, Nov. 9, 2000; 66 FR 24272, May 14, 2001; 66 FR 35106, July 3, 2001; 67 FR 6815, Feb. 13, 2002; 67 FR 6991, Feb. 14, 2002; 67 FR 77691, Dec. 19, 2002; 70 FR 59548, Oct. 12, 2005; 73 FR 18981, Apr. 8, 2008]

Notification, Reporting and Recordkeeping

§ 63.1210 What are the notification requirements?

(a) *Summary of requirements.* (1) You must submit the following notifications to the Administrator:

Reference	Notification
63.9(b)	Initial notifications that you are subject to Subpart EEE of this Part.
63.9(d)	Notification that you are subject to special compliance requirements.
63.9(j)	Notification and documentation of any change in information already provided under §63.9.
63.1206(b)(5)(i)	Notification of changes in design, operation, or maintenance.

63.1206(c)(8)(iv)	Notification of excessive bag leak detection system exceedances.
63.1206(c)(9)(v)	Notification of excessive particulate matter detection system exceedances.
63.1207(e), 63.9(e) 63.9(g)(1) and (3)	Notification of performance test and continuous monitoring system evaluation, including the performance test plan and CMS performance evaluation plan.[1]
63.1210(b)	Notification of intent to comply.
63.1210(d), 63.1207(j), 63.1207(k), 63.1207(l), 63.9(h), 63.10(d)(2), 63.10(e)(2)	Notification of compliance, including results of performance tests and continuous monitoring system performance evaluations.

[1]You may also be required on a case-by-case basis to submit a feedstream analysis plan under §63.1209(c)(3).

(2) You must submit the following notifications to the Administrator if you request or elect to comply with alternative requirements:

Reference	Notification, request, petition, or application
63.9(i)	You may request an adjustment to time periods or postmark deadlines for submittal and review of required information.
63.10(e)(3)(ii)	You may request to reduce the frequency of excess emissions and CMS performance reports.
63.10(f)	You may request to waive recordkeeping or reporting requirements.
63.1204(d)(2)(iii), 63.1220(d)(2)(iii)	Notification that you elect to comply with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(2)(iii), 63.1220(e)(2)(iii)	Notification that you elect to comply with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(4), 63.1213, 63.6(i), 63.9(c)	You may request an extension of the compliance date for up to one year.
63.1206(b)(5)(i)(C)	You may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting after making a change in the design or operation that could affect compliance with emission standards and prior to submitting a revised Notification of Compliance.
63.1206(b)(8)(iii)(B)	If you elect to conduct particulate matter CEMS correlation testing and wish to have federal particulate matter and opacity standards and associated operating limits waived during the testing, you must notify the Administrator by submitting the correlation test plan for review and approval.
63.1206(b)(8)(v)	You may request approval to have the particulate matter and opacity standards and associated operating limits and conditions waived for more than 96 hours for a correlation test.
63.1206(b)(9)	Owners and operators of lightweight aggregate kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrogen chloride/chlorine gas under certain conditions.
63.1206(b)(10)	Owners and operators of cement kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrogen chloride/chlorine gas under certain conditions.
63.1206(b)(14)	Owners and operators of incinerators may elect to comply with an alternative to the particulate matter standard.
63.1206(b)(15)	Owners and operators of cement and lightweight aggregate kilns may request to comply with the alternative to the interim standards for mercury.
63.1206(c)(2)(ii)(C)	You may request to make changes to the startup, shutdown, and malfunction plan.
63.1206(c)(5)(i)(C)	You may request an alternative means of control to provide control of combustion system leaks.
63.1206(c)(5)(i)(D)	You may request other techniques to prevent fugitive emissions without use of instantaneous pressure limits.
63.1207(c)(2)	You may request to base initial compliance on data in lieu of a comprehensive performance test.

63.1207(d)(3)	You may request more than 60 days to complete a performance test if additional time is needed for reasons beyond your control.
63.1207(e)(3), 63.7(h)	You may request a time extension if the Administrator fails to approve or deny your test plan.
63.1207(h)(2)	You may request to waive current operating parameter limits during pretesting for more than 720 hours.
63.1207(f)(1)(ii)(D)	You may request a reduced hazardous waste feedstream analysis for organic hazardous air pollutants if the reduced analysis continues to be representative of organic hazardous air pollutants in your hazardous waste feedstreams.
63.1207(g)(2)(v)	You may request to operate under a wider operating range for a parameter during confirmatory performance testing.
63.1207(i)	You may request up to a one-year time extension for conducting a performance test (other than the initial comprehensive performance test) to consolidate testing with other state or federally-required testing.
63.1207(j)(4)	You may request more than 90 days to submit a Notification of Compliance after completing a performance test if additional time is needed for reasons beyond your control.
63.1207(l)(3)	After failure of a performance test, you may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting.
63.1209(a)(5), 63.8(f)	You may request: (1) Approval of alternative monitoring methods for compliance with standards that are monitored with a CEMS; and (2) approval to use a CEMS in lieu of operating parameter limits.
63.1209(g)(1)	You may request approval of: (1) Alternatives to operating parameter monitoring requirements, except for standards that you must monitor with a continuous emission monitoring system (CEMS) and except for requests to use a CEMS in lieu of operating parameter limits; or (2) a waiver of an operating parameter limit.
63.1209(l)(1)	You may request to extrapolate mercury feedrate limits.
63.1209(n)(2)	You may request to extrapolate semivolatile and low volatile metal feedrate limits.
63.1211(d)	You may request to use data compression techniques to record data on a less frequent basis than required by §63.1209.

(b) *Notification of intent to comply (NIC).* These procedures apply to sources that have not previously complied with the requirements of paragraphs (b) and (c) of this section, and to sources that previously complied with the NIC requirements of §§63.1210 and 63.1212(a), which were in effect prior to October 11, 2000, that must make a technology change requiring a Class 1 permit modification to meet the standards of §§63.1219, 63.1220, and 63.1221.

(1) You must prepare a Notification of Intent to Comply that includes all of the following information:

(i) General information:

(A) The name and address of the owner/operator and the source;

(B) Whether the source is a major or an area source;

(C) Waste minimization and emission control technique(s) being considered;

(D) Emission monitoring technique(s) you are considering;

(E) Waste minimization and emission control technique(s) effectiveness;

(F) A description of the evaluation criteria used or to be used to select waste minimization and/or emission control technique(s); and

(G) A general description of how you intend to comply with the emission standards of this subpart.

(ii) As applicable to each source, information on key activities and estimated dates for these activities that will bring the source into compliance with emission control requirements of this subpart. You must include all of the following key activities and dates in your NIC:

(A) The dates by which you anticipate you will develop engineering designs for emission control systems or process changes for emissions;

(B) The date by which you anticipate you will commit internal or external resources for installing emission control systems or making process changes for emission control, or the date by which you will issue orders for the purchase of component parts to accomplish emission control or process changes.

(C) The date by which you anticipate you will submit construction applications;

(D) The date by which you anticipate you will initiate on-site construction, installation of emission control equipment, or process change;

(E) The date by which you anticipate you will complete on-site construction, installation of emission control equipment, or process change; and

(F) The date by which you anticipate you will achieve final compliance. The individual dates and milestones listed in paragraphs (b)(1)(ii)(A) through (F) of this section as part of the NIC are not requirements and therefore are not enforceable deadlines; the requirements of paragraphs (b)(1)(ii)(A) through (F) of this section must be included as part of the NIC only to inform the public of how you intend to comply with the emission standards of this subpart.

(iii) A summary of the public meeting required under paragraph (c) of this section;

(iv) If you intend to cease burning hazardous waste prior to or on the compliance date, the requirements of paragraphs (b)(1)(ii) and (b)(1)(iii) of this section do not apply. You must include in your NIC a schedule of key dates for the steps to be taken to stop hazardous waste activity at your combustion unit. Key dates include the date for submittal of RCRA closure documents required under subpart G, part 264 or subpart G, part 265 of this chapter.

(2) You must make a draft of the NIC available for public review no later than 30 days prior to the public meeting required under paragraph (c)(1) of this section or no later than 9 months after the effective date of the rule if you intend to cease burning hazardous waste prior to or on the compliance date.

(3) You must submit the final NIC to the Administrator:

(i) *Existing units.* No later than one year following the effective date of the emission standards of this subpart; or

(ii) *New units.* No later than 60 days following the informal public meeting.

(c) *NIC public meeting and notice.* (1) Prior to the submission of the NIC to the permitting agency and:

(i) *Existing units.* No later than 10 months after the effective date of the emission standards of this subpart, you must hold at least one informal meeting with the public to discuss the anticipated activities described in the draft NIC for achieving compliance with the emission standards of this subpart. You must post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

(ii) *New units.* No earlier than thirty (30) days following notice of the informal public meeting, you must hold at least one informal meeting with the public to discuss the anticipated activities described in the draft NIC for achieving compliance with the emission standards of this subpart. You must post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

(2) You must submit a summary of the meeting, along with the list of attendees and their addresses developed under paragraph (b)(1) of this section, and copies of any written comments or materials submitted at the meeting, to the Administrator as part of the final NIC, in accordance with paragraph (b)(1)(iii) of this section;

(3) You must provide public notice of the NIC meeting at least 30 days prior to the meeting and you must maintain, and provide to the Administrator upon request, documentation of the notice. You must provide public notice in all of the following forms:

(i) *Newspaper advertisement.* You must publish a notice in a newspaper of general circulation in the county or equivalent jurisdiction of your facility. In addition, you must publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdiction where such publication would be necessary to inform the affected public. You must publish the notice as a display advertisement.

(ii) *Visible and accessible sign.* You must post a notice on a clearly marked sign at or near the source. If you place the sign on the site of the hazardous waste combustor, the sign must be large enough to be readable from the nearest spot where the public would pass by the site.

(iii) *Broadcast media announcement.* You must broadcast a notice at least once on at least one local radio station or television station.

(iv) *Notice to the facility mailing list.* You must provide a copy of the notice to the facility mailing list in accordance with §124.10(c)(1)(ix) of this chapter.

(4) You must include all of the following in the notices required under paragraph (c)(3) of this section:

(i) The date, time, and location of the meeting;

(ii) A brief description of the purpose of the meeting;

(iii) A brief description of the source and proposed operations, including the address or a map (e.g., a sketched or copied street map) of the source location;

(iv) A statement encouraging people to contact the source at least 72 hours before the meeting if they need special access to participate in the meeting;

(v) A statement describing how the draft NIC (and final NIC, if requested) can be obtained; and

(vi) The name, address, and telephone number of a contact person for the NIC.

(5) The requirements of this paragraph do not apply to sources that intend to cease burning hazardous waste prior to or on the compliance date.

(d) *Notification of compliance.* (1) The Notification of Compliance status requirements of §63.9(h) apply, except that:

(i) The notification is a Notification of Compliance, rather than compliance status;

(ii) The notification is required for the initial comprehensive performance test and each subsequent comprehensive and confirmatory performance test; and

(iii) You must postmark the notification before the close of business on the 90th day following completion of relevant compliance demonstration activity specified in this subpart rather than the 60th day as required by §63.9(h)(2)(ii).

(2) Upon postmark of the Notification of Compliance, the operating parameter limits identified in the Notification of Compliance, as applicable, shall be complied with, the limits identified in the Documentation of Compliance or a previous Notification of Compliance are no longer applicable.

(3) The Notification of Compliance requirements of §63.1207(j) also apply.

[64 FR 53038, Sept. 30, 1999, as amended at 64 FR 63211, Nov. 19, 1999; 65 FR 42301, July 10, 2000; 66 FR 24272, May 14, 2001; 67 FR 6992, Feb. 14, 2002; 70 FR 59552, Oct. 12, 2005; 73 FR 18982, Apr. 8, 2008; 73 FR 64097, Oct. 28, 2008]

§ 63.1211 What are the recordkeeping and reporting requirements?

(a) *Summary of reporting requirements.* You must submit the following reports to the Administrator:

Reference	Report
63.10(d)(4)	Compliance progress reports, if required as a condition of an extension of the compliance date granted under §63.6(i).
63.10(d)(5)(i)	Periodic startup, shutdown, and malfunction reports.
63.10(d)(5)(ii)	Immediate startup, shutdown, and malfunction reports.
63.10(e)(3)	Excessive emissions and continuous monitoring system performance report and summary report.
63.1206(c)(2)(ii)(B)	Startup, shutdown, and malfunction plan.
63.1206(c)(3)(vi)	Excessive exceedances reports.
63.1206(c)(4)(iv)	Emergency safety vent opening reports.

(b) *Summary of recordkeeping requirements.* You must retain the following in the operating record:

Reference	Document, Data, or Information
63.1200, 63.10(b) and (c)	General. Information required to document and maintain compliance with the regulations of Subpart EEE, including data recorded by continuous monitoring systems (CMS), and copies of all notifications, reports, plans, and other documents submitted to the Administrator.
63.1204(d)(1)(ii), 63.1220(d)(1)(ii)	Documentation of mode of operation changes for cement kilns with in-line raw mills.
63.1204(d)(2)(ii), 63.1220(d)(2)(ii)	Documentation of compliance with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(2)(ii), 63.1220(e)(2)(ii)	Documentation of compliance with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b)(1)(ii)	If you elect to comply with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste, you must document in the operating record that you are in compliance with those requirements.
63.1206(b)(5)(ii)	Documentation that a change will not adversely affect compliance with the emission standards or operating requirements.
63.1206(b)(11)	Calculation of hazardous waste residence time.
63.1206(c)(2)	Startup, shutdown, and malfunction plan.
63.1206(c)(2)(v)(A)	Documentation of your investigation and evaluation of excessive exceedances during malfunctions.
63.1206(c)(3)(v)	Corrective measures for any automatic waste feed cutoff that results in an exceedance of an emission standard or operating parameter limit.
63.1206(c)(3)(vii)	Documentation and results of the automatic waste feed cutoff operability testing.
63.1206(c)(4)(ii)	Emergency safety vent operating plan.
63.1206(c)(4)(iii)	Corrective measures for any emergency safety vent opening.
63.1206(c)(5)(ii)	Method used for control of combustion system leaks.
63.1206(c)(6)	Operator training and certification program.
63.1206(c)(7)(i)(D)	Operation and maintenance plan.
63.1209(c)(2)	Feedstream analysis plan.
63.1209(k)(6)(iii), 63.1209(k)(7)(ii), 63.1209(k)(9)(ii), 63.1209(o)(4)(iii)	Documentation that a substitute activated carbon, dioxin/furan formation reaction inhibitor, or dry scrubber sorbent will provide the same level of control as the original material.

63.1209(k)(7)(i)(C)	Results of carbon bed performance monitoring.
63.1209(q)	Documentation of changes in modes of operation.
63.1211(c)	Documentation of compliance.

(c) *Documentation of compliance.* (1) By the compliance date, you must develop and include in the operating record a Documentation of Compliance. You are not subject to this requirement, however, if you submit a Notification of Compliance under §63.1207(j) prior to the compliance date. Upon inclusion of the Documentation of Compliance in the operating record, hazardous waste burning incinerators, cement kilns, and lightweight aggregate kilns regulated under the interim standards of §§63.1203, 63.1204, and 63.1205 are no longer subject to compliance with the previously applicable Notification of Compliance.

(2) The Documentation of Compliance must identify the applicable emission standards under this subpart and the limits on the operating parameters under §63.1209 that will ensure compliance with those emission standards.

(3) You must include a signed and dated certification in the Documentation of Compliance that:

(i) Required CEMs and CMS are installed, calibrated, and continuously operating in compliance with the requirements of this subpart; and

(ii) Based on an engineering evaluation prepared under your direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation, and considering at a minimum the design, operation, and maintenance characteristics of the combustor and emissions control equipment, the types, quantities, and characteristics of feedstreams, and available emissions data:

(A) You are in compliance with the emission standards of this subpart; and

(B) The limits on the operating parameters under §63.1209 ensure compliance with the emission standards of this subpart.

(4) You must comply with the emission standards and operating parameter limits specified in the Documentation of Compliance.

(d) *Data compression.* You may submit a written request to the Administrator for approval to use data compression techniques to record data from CMS, including CEMS, on a frequency less than that required by §63.1209. You must submit the request for review and approval as part of the comprehensive performance test plan.

(1) You must record a data value at least once each ten minutes.

(2) For each CEMS or operating parameter for which you request to use data compression techniques, you must recommend:

(i) A fluctuation limit that defines the maximum permissible deviation of a new data value from a previously generated value without requiring you to revert to recording each one-minute value.

(A) If you exceed a fluctuation limit, you must record each one-minute value for a period of time not less than ten minutes.

(B) If neither the fluctuation limit nor the data compression limit are exceeded during that period of time, you may reinitiate recording data values on a frequency of at least once each ten minutes; and

(ii) A data compression limit defined as the closest level to an operating parameter limit or emission standard at which reduced data recording is allowed.

(A) Within this level and the operating parameter limit or emission standard, you must record each one-minute average.

(B) The data compression limit should reflect a level at which you are unlikely to exceed the specific operating parameter limit or emission standard, considering its averaging period, with the addition of a new one-minute average.

[64 FR 53038, Sept. 30, 1999, as amended at 64 FR 63212, Nov. 19, 1999; 65 FR 42301, July 10, 2000; 66 FR 24272, May 14, 2001; 66 FR 35106, July 3, 2001; 67 FR 6993, Feb. 14, 2002; 70 FR 59554, Oct. 12, 2005]

Other

§ 63.1212 What are the other requirements pertaining to the NIC?

(a) *Certification of intent to comply.* The Notice of Intent to Comply (NIC) must contain the following certification signed and dated by a responsible official as defined under §63.2 of this chapter: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(b) *New units.* Any source that files a RCRA permit application or permit modification request for construction of a hazardous waste combustion unit after October 12, 2005 must:

(1) Prepare a draft NIC pursuant to §63.1210(b) and make it available to the public upon issuance of the notice of public meeting pursuant to §63.1210(c)(3);

(2) Prepare a draft comprehensive performance test plan pursuant to the requirements of §63.1207 and make it available for public review upon issuance of the notice of NIC public meeting;

(3) Provide notice to the public of a pre-application meeting pursuant to §124.31 of this chapter or notice to the public of a permit modification request pursuant to §270.42 of this chapter;

(4) Hold an informal public meeting [pursuant to §63.1210(c)(1) and (c)(2)] no earlier than 30 days following notice of the NIC public meeting and notice of the pre-application meeting or notice of the permit modification request to discuss anticipated activities described in the draft NIC and pre-application or permit modification request for achieving compliance with the emission standards of this subpart; and

(5) Submit a final NIC pursuant to §63.1210(b)(3).

(c) *Information Repository specific to new combustion units.* (1) Any source that files a RCRA permit application or modification request for construction of a new hazardous waste combustion unit after October 12, 2005 may be required to establish an information repository if deemed appropriate.

(2) The Administrator may assess the need, on a case-by-case basis for an information repository. When assessing the need for a repository, the Administrator shall consider the level of public interest, the presence of an existing repository, and any information available via the New Source Review and Title V permit processes. If the Administrator determines a need for a repository, then the Administrator shall notify the facility that it must establish and maintain an information repository.

(3) The information repository shall contain all documents, reports, data, and information deemed necessary by the Administrator. The Administrator shall have the discretion to limit the contents of the repository.

(4) The information repository shall be located and maintained at a site chosen by the source. If the Administrator finds the site unsuitable for the purposes and persons for which it was established, due to problems with location, hours of availability, access, or other relevant considerations, then the Administrator shall specify a more appropriate site.

(5) The Administrator shall require the source to provide a written notice about the information repository to all individuals on the source mailing list.

(6) The source shall be responsible for maintaining and updating the repository with appropriate information throughout a period specified by the Administrator. The Administrator may close the repository at his or her discretion based on the considerations in paragraph (c)(2) of this section.

[70 FR 59555, Oct. 12, 2005, as amended at 73 FR 18982, Apr. 8, 2008]

§ 63.1213 How can the compliance date be extended to install pollution prevention or waste minimization controls?

(a) *Applicability.* You may request from the Administrator or State with an approved Title V program an extension of the compliance date of up to one year. An extension may be granted if you can reasonably document that the installation of pollution prevention or waste minimization measures will significantly reduce the amount and/or toxicity of hazardous wastes entering the feedstream(s) of the hazardous waste combustor(s), and that you could not install the necessary control measures and comply with the emission standards and operating requirements of this subpart by the compliance date.

(b) *Requirements for requesting an extension.* (1) You must make your requests for an (up to) one-year extension in writing in accordance with §63.6(i)(4)(B) and (C). The request must contain the following information:

(i) A description of pollution prevention or waste minimization controls that, when installed, will significantly reduce the amount and/or toxicity of hazardous wastes entering the feedstream(s) of the hazardous waste combustor(s). Pollution prevention or waste minimization measures may include: equipment or technology modifications, reformulation or redesign of products, substitution of raw materials, improvements in work practices, maintenance, training, inventory control, or recycling practices conducted as defined in §261.1(c) of this chapter;

(ii) A description of other pollution controls to be installed that are necessary to comply with the emission standards and operating requirements;

(iii) A reduction goal or estimate of the annual reductions in quantity and/or toxicity of hazardous waste(s) entering combustion feedstream(s) that you will achieve by installing the proposed pollution prevention or waste minimization measures;

(iv) A comparison of reductions in the amounts and/or toxicity of hazardous wastes combusted after installation of pollution prevention or waste minimization measures to the amounts and/or toxicity of hazardous wastes combusted prior to the installation of these measures. If the difference is less than a fifteen percent reduction, include a comparison to pollution prevention and waste minimization reductions recorded during the previous five years;

(v) Reasonable documentation that installation of the pollution prevention or waste minimization changes will not result in a net increase (except for documented increases in production) of hazardous constituents released to the environment through other emissions, wastes or effluents;

(vi) Reasonable documentation that the design and installation of waste minimization and other measures that are necessary for compliance with the emission standards and operating requirements of this subpart cannot otherwise be installed within the three year compliance period, and

(vii) The information required in §63.6(i)(6)(i)(B) through (D).

(2) You may enclose documentation prepared under an existing State-required pollution prevention program that contains the information prescribed in paragraph (b) of this section with a request for extension in lieu of complying with the time extension requirements of that paragraph.

(c) *Approval of request for extension of compliance date.* Based on the information provided in any request made under paragraph (a) of this section, the Administrator or State with an approved title V program may grant an extension of the compliance date of this subpart. The extension will be in writing in accordance with §§63.6(i)(10)(i) through 63.6(i)(10)(v)(A).

[57 FR 61992, Dec. 29, 1992, as amended at 67 FR 6994, Feb. 14, 2002; 67 FR 77691, Dec. 19, 2002]

§ 63.1214 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to requirements in §§63.1200, 63.1203, 63.1204, 63.1205, 63.1206(a), 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221.

(2) Approval of major alternatives to test methods under §§63.7(e)(2)(ii) and (f), 63.1208(b), and 63.1209(a)(1), as defined under §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §§63.8(f) and 63.1209(a)(5), as defined under §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §§63.10(f) and 63.1211(a) through (c), as defined under §63.90, and as required in this subpart.

[68 FR 37356, June 23, 2003, as amended at 70 FR 59555, Oct. 12, 2005]

§ 63.1215 What are the health-based compliance alternatives for total chlorine?

(a) *General* —(1) *Overview.* You may establish and comply with health-based compliance alternatives for total chlorine under the procedures prescribed in this section for your hazardous waste combustors other than hydrochloric acid production furnaces. You may comply with these health-based compliance alternatives in lieu of the emission standards for total chlorine provided under §§63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. To identify and comply with the limits, you must:

(i) Identify a total chlorine emission concentration (ppmv) expressed as chloride (Cl(−)) equivalent for each on site hazardous waste combustor. You may select total chlorine emission concentrations as you choose to demonstrate eligibility for the risk-based limits under this section, except as provided by paragraph (b)(7) of this section;

(ii) Apportion the total chlorine emission concentration between HCl and Cl_2according to paragraph (b)(6)(i) of this section, and calculate HCl and Cl_2emission rates (lb/hr) using the gas flowrate and other parameters from the most recent regulatory compliance test.

(iii) Calculate the annual average HCl-equivalent emission rate as prescribed in paragraph (b)(2) of this section.

(iv) Perform an eligibility demonstration to determine if your HCl-equivalent emission rate meets the national exposure standard and thus is below the annual average HCl-equivalent emission rate limit, as prescribed by paragraph (c) of this section;

(v) Submit your eligibility demonstration for review and approval, as prescribed by paragraph (e) of this section, which must include information to ensure that the 1-hour average HCl-equivalent emission rate limit is not exceeded, as prescribed by paragraph (d) of this section;

(vi) Demonstrate compliance with the annual average HCl-equivalent emission rate limit during the comprehensive performance test, as prescribed by the testing and monitoring requirements under paragraph (e) of this section;

(vii) Comply with compliance monitoring requirements, including establishing feedrate limits on total chlorine and chloride, and operating parameter limits on emission control equipment, as prescribed by paragraph (f) of this section; and

(viii) Comply with the requirements for changes, as prescribed by paragraph (h) of this section.

(2) *Definitions.* In addition to the definitions under §63.1201, the following definitions apply to this section:

1–Hour Average HCl-Equivalent Emission Rate means the HCl-equivalent emission rate (lb/hr) determined by equating the toxicity of chlorine to HCl using aRELs as the health risk metric for acute exposure.

1–Hour Average HCl-Equivalent Emission Rate Limit means the HCl-equivalent emission rate (lb/hr) determined by equating the toxicity of chlorine to HCl using aRELs as the health risk metric for acute exposure and which ensures that maximum 1-hour average ambient concentrations of HCl-equivalents do not exceed a Hazard Index of 1.0, rounded to the nearest tenths decimal place (0.1), at an off-site receptor location.

Acute Reference Exposure Level (aREL) means health thresholds below which there would be no adverse health effects for greater than once in a lifetime exposures of one hour. ARELs are developed by the California Office of Health Hazard Assessment and are available at *http://www.oehha.ca.gov/air/acute_rels/acuterel.html.*

Annual Average HCl-Equivalent Emission Rate means the HCl-equivalent emission rate (lb/hr) determined by equating the toxicity of chlorine to HCl using RfCs as the health risk metric for long-term exposure.

Annual Average HCl-Equivalent Emission Rate Limit means the HCl-equivalent emission rate (lb/hr) determined by equating the toxicity of chlorine to HCl using RfCs as the health risk metric for long-term exposure and which ensures that maximum annual average ambient concentrations of HCl equivalents do not exceed a Hazard Index of 1.0, rounded to the nearest tenths decimal place (0.1), at an off-site receptor location.

Hazard Index (HI) means the sum of more than one Hazard Quotient for multiple substances and/or multiple exposure pathways. In this section, the Hazard Index is the sum of the Hazard Quotients for HCl and chlorine.

Hazard Quotient (HQ) means the ratio of the predicted media concentration of a pollutant to the media concentration at which no adverse effects are expected. For chronic inhalation exposures, the HQ is calculated under this section as the air concentration divided by the RfC. For acute inhalation exposures, the HQ is calculated under this section as the air concentration divided by the aREL.

Look-up table analysis means a risk screening analysis based on comparing the HCl-equivalent emission rate from the affected source to the appropriate HCl-equivalent emission rate limit specified in Tables 1 through 4 of this section.

Reference Concentration (RfC) means an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

(b) *HCl-equivalent emission rates* . (1) You must express total chlorine emission rates for each hazardous waste combustor as HCl-equivalent emission rates.

(2) *Annual average rates* . You must calculate annual average toxicity-weighted HCl-equivalent emission rates for each combustor as follows:

$ER_{LTtw} = ER_{HCl} + ER_{Cl}2 \times (RfC_{HCl}/RfC_{Cl}2)$

Where:

ER_{LTtw} is the annual average HCl toxicity-weighted emission rate (HCl-equivalent emission rate) considering long-term exposures, lb/hr

ER_{HCl} is the emission rate of HCl in lbs/hr

$ER_{Cl}2$ is the emission rate of chlorine in lbs/hr

RfC_{HCl} is the reference concentration of HCl

$RfC_{Cl}2$ is the reference concentration of chlorine

(3) *1-hour average rates* . You must calculate 1-hour average toxicity-weighted HCl-equivalent emission rates for each combustor as follows:

$ER_{STtw} = ER_{HCl} + ER_{Cl}2 \times (aREL_{HCl}/aREL_{Cl}2)$

Where:

$ER_{STtw}$is the 1-hour average HCl-toxicity-weighted emission rate (HCl-equivalent emission rate) considering 1-hour (short-term) exposures, lb/hr

$ER_{HCl}$is the emission rate of HCl in lbs/hr

$ER_{Cl}2$is the emission rate of chlorine in lbs/hr

$aREL_{HCl}$is the aREL for HCl

$aREL_{Cl}2$is the aREL for chlorine

(4) You must use the RfC values for hydrogen chloride and chlorine found at *http://epa.gov/ttn/atw/toxsource/summary.html* .

(5) You must use the aREL values for hydrogen chloride and chlorine found at *http://www.oehha.ca.gov/air/acute_rels/acuterel.html* .

(6) *Cl_2 HCl ratios* —(i) *Ratio for calculating annual average HCl-equivalent emission rates* . (A) To calculate the annual average HCl-equivalent emission rate (lb/hr) for each combustor, you must apportion the total chlorine emission concentration (ppmv chloride (Cl(-)) equivalent) between HCl and chlorine according to the historical average Cl_2/HCl volumetric ratio for all regulatory compliance tests.

(B) You must calculate HCl and Cl_2emission rates (lb/hr) using the apportioned emission concentrations and the gas flowrate and other parameters from the most recent regulatory compliance test.

(C) You must calculate the annual average HCl-equivalent emission rate using these HCl and Cl_2emission rates and the equation in paragraph (b)(2) of this section.

(ii) *Ratio for calculating 1-hour average HCl-equivalent emission rates* . (A) To calculate the 1-hour average HCl-equivalent emission rate for each combustor as a criterion for you to determine under paragraph (d) of this section if an hourly rolling average feedrate limit on total chlorine and chloride may be waived, you must apportion the total chlorine emission concentration (ppmv chloride (Cl(-)) equivalent) between HCl and chlorine according to the historical highest Cl_2/HCl volumetric ratio for all regulatory compliance tests.

(B) You must calculate HCl and Cl_2emission rates (lb/hr) using the apportioned emission concentrations and the gas flowrate and other parameters from the most recent regulatory compliance test.

(C) You must calculate the 1-hour average HCl-equivalent emission rate using these HCl and Cl_2emission rates and the equation in paragraph (b)(3) of this section.

(iii) *Ratios for new sources* . (A) You must use engineering information to estimate the Cl_2/HCl volumetric ratio for a new source for the initial eligibility demonstration.

(B) You must use the Cl_2/HCl volumetric ratio demonstrated during the initial comprehensive performance test to demonstrate in the Notification of Compliance that your HCl-equivalent emission rate does not exceed your HCl-equivalent emission rate limit.

(C) When approving the test plan for the initial comprehensive performance test, the permitting authority will establish a periodic testing requirement, such as every 3 months for 1 year, to establish a record of representative Cl_2/HCl volumetric ratios.

(*1*) You must revise your HCl-equivalent emission rates and HCl-equivalent emission rate limits after each such test using the procedures prescribed in paragraphs (b)(6)(i) and (ii) of this section.

(*2*) If you no longer are eligible for the health-based compliance alternative, you must notify the permitting authority immediately and either:

(*i*) Submit a revised eligibility demonstration requesting lower HCl-equivalent emission rate limits, establishing lower HCl-equivalent emission rates, and establishing by downward extrapolation lower feedrate limits for total chlorine and chloride; or

(*ii*) Request a compliance schedule of up to three years to demonstrate compliance with the emission standards under §§63.1216, 63.1217, 63.1219, 63.1220, and 63.1221.

(iv) *Unrepresentative or inadequate historical* Cl_2 */HCl volumetric ratios* . (A) If you believe that the Cl_2/HCl volumetric ratio for one or more historical regulatory compliance tests is not representative of the current ratio, you may request that the permitting authority allow you to screen those ratios from the analysis of historical ratios.

(B) If the permitting authority believes that too few historical ratios are available to calculate a representative average ratio or establish a maximum ratio, the permitting authority may require you to conduct periodic testing to establish representative ratios.

(v) *Updating* Cl_2 */HCl ratios* . You must include the Cl_2/HCl volumetric ratio demonstrated during each performance test in your data base of historical Cl2/HCl ratios to update the ratios you establish under paragraphs (b)(6)(i) and (ii) of this section for subsequent calculations of the annual average and 1-hour average HCl-equivalent emission rates.

(7) *Emission rates are capped* . The hydrogen chloride and chlorine emission rates you use to calculate the HCl-equivalent emission rate limit for incinerators, cement kilns, and lightweight aggregate kilns must not result in total chlorine emission concentrations exceeding:

(i) For incinerators that were existing sources on April 19, 1996: 77 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;

(ii) For incinerators that are new or reconstructed sources after April 19, 1996: 21 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;

(iii) For cement kilns that were existing sources on April 19, 1996: 130 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;

(iv) For cement kilns that are new or reconstructed sources after April 19, 1996: 86 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;

(v) For lightweight aggregate kilns that were existing sources on April 19, 1996: 600 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;

(vi) For lightweight aggregate kilns that are new or reconstructed sources after April 19, 1996: 600 parts per million by volume, combined emissions, expressed as chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen.

(c) *Eligibility demonstration* —(1) *General.* (i) You must perform an eligibility demonstration to determine whether the total chlorine emission rates you select for each on-site hazardous waste combustor meet the national exposure standards using either a look-up table analysis prescribed by paragraph (c)(3) of this section, or a site-specific compliance demonstration prescribed by paragraph (c)(4) of this section.

(ii) You must also determine in your eligibility demonstration whether each combustor may exceed the 1-hour HCl-equivalent emission rate limit absent an hourly rolling average limit on the feedrate of total chlorine and chloride, as provided by paragraph (d) of this section.

(2) *Definition of eligibility.* (i) Eligibility for the risk-based total chlorine standard is determined by comparing the annual average HCl-equivalent emission rate for the total chlorine emission rate you select for each combustor to the annual average HCl-equivalent emission rate limit.

(ii) The annual average HCl-equivalent emission rate limit ensures that the Hazard Index for chronic exposure from HCl and chlorine emissions from all on-site hazardous waste combustors is less than or equal to 1.0, rounded to the nearest tenths decimal place (0.1), for the actual individual most exposed to the facility's emissions, considering off-site locations where people reside and where people congregate for work, school, or recreation.

(iii) Your facility is eligible for the health-based compliance alternative for total chlorine if either:

(A) The annual average HCl-equivalent emission rate for each on-site hazardous waste combustor is below the appropriate value in the look-up table determined under paragraph (c)(3) of this section; or

(B) The annual average HCl-equivalent emission rate for each on-site hazardous waste combustor is below the annual average HCl-equivalent emission rate limit you calculate based on a site-specific compliance demonstration under paragraph (c)(4) of this section.

(3) *Look-up table analysis.* Look-up tables for the eligibility demonstration are provided as Tables 1 and 2 to this section.

(i) Table 1 presents annual average HCl-equivalent emission rate limits for sources located in flat terrain. For purposes of this analysis, flat terrain is terrain that rises to a level not exceeding one half the stack height within a distance of 50 stack heights.

(ii) Table 2 presents annual average HCl-equivalent emission rate limits for sources located in simple elevated terrain. For purposes of this analysis, simple elevated terrain is terrain that rises to a level exceeding one half the stack height, but that does not exceed the stack height, within a distance of 50 stack heights.

(iii) To determine the annual average HCl-equivalent emission rate limit for a source from the look-up table, you must use the stack height and stack diameter for your hazardous waste combustors and the distance between the stack and the property boundary.

(iv) If any of these values for stack height, stack diameter, and distance to nearest property boundary do not match the exact values in the look-up table, you must use the next lowest table value.

(v) *Adjusted HCl-equivalent emission rate limit for multiple on-site combustors.* (A) If you have more than one hazardous waste combustor on site, the sum across all hazardous waste combustors of the ratio of the adjusted HCl-equivalent emission rate limit to the HCl-equivalent emission rate limit provided by Tables 1 or 2 cannot exceed 1.0, according to the following equation:

$$\sum_{i=1}^{n} \frac{\text{HCl-Equivalent Emission Rate Limit Adjusted}_i}{\text{HCl-Equivalent Emission Rate Limit Table}_i} \leq 1.0$$

Where:

i = number of on-site hazardous waste combustors;

HCl-Equivalent Emission Rate Limit Adjusted$_i$means the apportioned, allowable HCl-equivalent emission rate limit for combustor i, and

HCl-Equivalent Emission Rate Limit Table$_i$means the HCl-equivalent emission rate limit from Table 1 or 2 to §63.1215 for combustor *i.*

(B) The adjusted HCl-equivalent emission rate limit becomes the HCl-equivalent emission rate limit.

(4) *Site-specific compliance demonstration.* (i) You may use any scientifically-accepted peer-reviewed risk assessment methodology for your site-specific compliance demonstration to calculate an annual average HCl-equivalent emission rate limit for each on-site hazardous waste combustor. An example of one approach for performing the demonstration for air toxics can be found in the EPA's “Air Toxics Risk Assessment Reference Library, Volume 2, Site-Specific Risk Assessment Technical Resource Document,” which may be obtained through the EPA's Air Toxics Web site at *http://www.epa.gov/ttn/fera/risk_atra_main.html.*

(ii) The annual average HCl-equivalent emission rate limit is the HCl-equivalent emission rate that ensures that the Hazard Index associated with maximum annual average exposures is not greater than 1.0 rounded to the nearest tenths decimal place (0.1).

(iii) To determine the annual average HCl-equivalent emission rate limit, your site-specific compliance demonstration must, at a minimum:

(A) Estimate long-term inhalation exposures through the estimation of annual or multi-year average ambient concentrations;

(B) Estimate the inhalation exposure for the actual individual most exposed to the facility's emissions from hazardous waste combustors, considering off-site locations where people reside and where people congregate for work, school, or recreation;

(C) Use site-specific, quality-assured data wherever possible;

(D) Use health-protective default assumptions wherever site-specific data are not available, and:

(E) Contain adequate documentation of the data and methods used for the assessment so that it is transparent and can be reproduced by an experienced risk assessor and emissions measurement expert.

(iv) Your site-specific compliance demonstration need not:

(A) Assume any attenuation of exposure concentrations due to the penetration of outdoor pollutants into indoor exposure areas;

(B) Assume any reaction or deposition of the emitted pollutants during transport from the emission point to the point of exposure.

(d) *Assurance that the 1-hour HCl-equivalent emission rate limit will not be exceeded.* To ensure that the 1-hour HCl-equivalent emission rate limit will not be exceeded when complying with the annual average HCl-equivalent emission rate limit, you must establish a 1-hour average HCl-equivalent emission rate for each combustor, establish a 1-hour average HCl-equivalent emission rate limit for each combustor, and consider site-specific factors including prescribed criteria to determine if the 1-hour average HCl-equivalent emission rate limit may be exceeded absent an hourly rolling average limit on the feedrate of total chlorine and chloride. If the 1-hour average HCl-equivalent emission rate limit may be exceeded, you must establish an hourly rolling average feedrate limit on total chlorine as provided by paragraph (f)(3) of this section.

(1) *1-hour average HCl-equivalent emission rate.* You must calculate the 1-hour average HCl-equivalent emission rate from the total chlorine emission concentration you select for each source as prescribed in paragraph (b)(6)(ii)(C) of this section.

(2) *1-hour average HCl-equivalent emission rate limit.* You must establish the 1-hour average HCl-equivalent emission rate limit for each affected source using either a look-up table analysis or site-specific analysis:

(i) *Look-up table analysis.* Look-up tables are provided for 1-hour average HCl-equivalent emission rate limits as Table 3 and Table 4 to this section. Table 3 provides limits for facilities located in flat terrain. Table 4 provides limits for facilities located in simple elevated terrain. You must use the Tables to establish 1-hour average HCl-equivalent emission rate limits as prescribed in paragraphs (c)(3)(iii) through (c)(3)(v) of this section for annual average HCl-equivalent emission rate limits.

(ii) *Site-specific analysis.* The 1-hour average HCl-equivalent emission rate limit is the HCl-equivalent emission rate that ensures that the Hazard Index associated with maximum 1-hour average exposures is not greater than 1.0 rounded to the nearest tenths decimal place (0.1). You must follow the risk assessment procedures under paragraph (c)(4) of this section to estimate short-term inhalation exposures through the estimation of maximum 1-hour average ambient concentrations.

(3) *Criteria for determining whether the 1-hour HCl-equivalent emission rate may be exceeded absent an hourly rolling average limit on the feedrate of total chlorine and chloride.* An hourly rolling average feedrate limit on total chlorine and chloride is waived if you determine considering the criteria listed below that the long-term feedrate limit (and averaging period) established under paragraph (c)(4)(i) of this section will also ensure that the 1-hour average HCl-equivalent emission rate will not exceed the 1-hour average HCl-equivalent emission rate limit you calculate for each combustor.

(i) The ratio of the 1-hour average HCl-equivalent emission rate based on the total chlorine emission rate you select for each hazardous waste combustor to the 1-hour average HCl-equivalent emission rate limit for the combustor; and

(ii) The potential for the source to vary total chlorine and chloride feedrates substantially over the averaging period for the feedrate limit established under paragraph (c)(4)(i) of this section.

(e) *Review and approval of eligibility demonstrations* —(1) *Content of the eligibility demonstration* —(i) *General.* The eligibility demonstration must include the following information, at a minimum:

(A) Identification of each hazardous waste combustor combustion gas emission point (e.g., generally, the flue gas stack);

(B) The maximum and average capacity at which each combustor will operate, and the maximum rated capacity for each combustor, using the metric of stack gas volume (under both actual and standard conditions) emitted per unit of time, as well as any other metric that is appropriate for the combustor (e.g., million Btu/hr heat input for boilers; tons of dry raw material feed/hour for cement kilns);

(C) Stack parameters for each combustor, including, but not limited to stack height, stack diameter, stack gas temperature, and stack gas exit velocity;

(D) Plot plan showing all stack emission points, nearby residences and property boundary line;

(E) Identification of any stack gas control devices used to reduce emissions from each combustor;

(F) Identification of the RfC values used to calculate annual average HCl-equivalent emission rates and the aREL values used to calculate 1-hour average HCl-equivalent emission rates;

(G) Calculations used to determine the annual average and 1-hour average HCl-equivalent emission rates and rate limits, including calculation of the Cl_2/HCl ratios as prescribed by paragraph (b)(6) of this section;

(ii) *Additional content to implement the annual average HCl-equivalent emission rate limit.* You must include the following in your eligibility demonstration to implement the annual average HCl-equivalent emission rate limit:

(A) For incinerators, cement kilns, and lightweight aggregate kilns, calculations to confirm that the annual average HCl-equivalent emission rate that you calculate from the total chlorine emission rate you select for each combustor does not exceed the limits provided by paragraph (b)(7) of this section;

(B) Comparison of the annual average HCl-equivalent emission rate limit for each combustor to the annual average HCl-equivalent emission rate for the total chlorine emission rate you select for each combustor;

(C) The annual average HCl-equivalent emission rate limit for each hazardous waste combustor, and the limits on operating parameters required under paragraph (g)(1) of this section;

(D) Determination of the long-term chlorine feedrate limit, including the total chlorine system removal efficiency for sources that establish an (up to) annual rolling average feedrate limit under paragraph (g)(2)(ii) of this section;

(iii) *Additional content to implement the 1-hour average HCl-equivalent emission rate limit.* You must include the following in your eligibility demonstration to implement the 1-hour average HCl-equivalent emission rate limit:

(A) Determination of whether the combustor may exceed the 1-hour HCl-equivalent emission rate limit absent an hourly rolling average chlorine feedrate limit, including:

(*1*) Determination of the 1-hour average HCl-equivalent emission rate from the total chlorine emission rate you select for the combustor;

(*2*) Determination of the 1-hour average HCl-equivalent emission rate limit using either look-up Tables 3 and 4 to this section or site-specific risk analysis;

(*3*) Determination of the ratio of the 1-hour average HCl-equivalent emission rate to the 1-hour average HCl-equivalent emission rate limit for the combustor; and

(*4*) The potential for the source to vary total chlorine and chloride feedrates substantially over the averaging period for the long-term feedrate limit established under paragraphs (g)(2)(i) and (g)(2)(ii) of this section; and

(B) Determination of the hourly rolling average chlorine feedrate limit, including the total chlorine system removal efficiency.

(iv) *Additional content of a look-up table demonstration.* If you use the look-up table analysis to establish HCl-equivalent emission rate limits, your eligibility demonstration must also contain, at a minimum, the following:

(A) Documentation that the facility is located in either flat or simple elevated terrain; and

(B) For facilities with more than one on-site hazardous waste combustor, documentation that the sum of the ratios for all such combustors of the HCl-equivalent emission rate to the HCl-equivalent emission rate limit does not exceed 1.0.

(v) *Additional content of a site-specific compliance demonstration.* If you use a site-specific compliance demonstration, your eligibility demonstration must also contain, at a minimum, the following information to support your determination of the annual average HCl-equivalent emission rate limit for each combustor:

(A) Identification of the risk assessment methodology used;

(B) Documentation of the fate and transport model used;

(C) Documentation of the fate and transport model inputs, including the stack parameters listed in paragraph (d)(1)(i)(C) of this section converted to the dimensions required for the model;

(D) As applicable:

(*1*) Meteorological data;

(*2*) Building, land use, and terrain data;

(*3*) Receptor locations and population data, including areas where people congregate for work, school, or recreation; and

(*4*) Other facility-specific parameters input into the model;

(E) Documentation of the fate and transport model outputs; and

(F) Documentation of any exposure assessment and risk characterization calculations.

(2) *Review and approval* —(i) *Existing sources.* (A) If you operate an existing source, you must submit the eligibility demonstration to your permitting authority for review and approval not later than 12 months prior to the compliance date. You must also submit a separate copy of the eligibility demonstration to: U.S. EPA, Risk and Exposure Assessment Group, Emission Standards Division (C404–01), Attn: Group Leader, Research Triangle Park, North Carolina 27711, electronic mail address *REAG@epa.gov.*

(B) Your permitting authority should notify you of approval or intent to disapprove your eligibility demonstration within 6 months after receipt of the original demonstration, and within 3 months after receipt of any supplemental information that you submit. A notice of intent to disapprove your eligibility demonstration, whether before or after the compliance date, will identify incomplete or inaccurate information or noncompliance with prescribed procedures and specify how much time you will have to submit additional information or to achieve the MACT standards for total chlorine under §§63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. If your eligibility demonstration is disapproved, the permitting authority may extend the compliance date of the total chlorine standards up to one year to allow you to make changes to the design or operation of the combustor or related systems as quickly as practicable to enable you to achieve compliance with the MACT total chlorine standards.

(C) If your permitting authority has not approved your eligibility demonstration by the compliance date, and has not issued a notice of intent to disapprove your demonstration, you may begin complying, on the compliance date, with the HCl-equivalent emission rate limits you present in your eligibility demonstration provided that you have made a good faith effort to provide complete and accurate information and to respond to any requests for additional information in a timely manner. If the permitting authority believes that you have not made a good faith effort to provide complete and accurate information or to respond to any requests for additional information, however, the

authority may notify you in writing by the compliance date that you have not met the conditions for complying with the health-based compliance alternative without prior approval. Such notice will explain the basis for concluding that you have not made a good faith effort to comply with the health-based compliance alternative by the compliance date.

(D) If your permitting authority issues a notice of intent to disapprove your eligibility demonstration after the compliance date, the authority will identify the basis for that notice and specify how much time you will have to submit additional information or to comply with the MACT standards for total chlorine under §§63.1216, 63.1217, 63.1219, 63.1220, and 63.1221. The permitting authority may extend the compliance date of the total chlorine standards up to one-year to allow you to make changes to the design or operation of the combustor or related systems as quickly as practicable to enable you to achieve compliance with the MACT standards for total chlorine.

(ii) *New or reconstructed sources* —(A) *General.* The procedures for review and approval of eligibility demonstrations applicable to existing sources under paragraph (e)(2)(i) of this section also apply to new or reconstructed sources, except that the date you must submit the eligibility demonstration is as prescribed in this paragraph (e)(2)(ii).

(B) If you operate a new or reconstructed source that starts up before April 12, 2007, or a solid fuel boiler or liquid fuel boiler that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP before April 12, 2007, you must either:

(*1*) Comply with the final total chlorine emission standards under §§63.1216, 63.1217, 63.1219, 63.1220, and 63.1221, by October 12, 2005, or upon startup, whichever is later, except for a standard that is more stringent than the standard proposed on April 20, 2004 for your source. If a final standard is more stringent than the proposed standard, you may comply with the proposed standard until October 14, 2008, after which you must comply with the final standard; or

(*2*) Submit an eligibility demonstration for review and approval under this section by April 12, 2006, and comply with the HCl-equivalent emission rate limits and operating requirements you establish in the eligibility demonstration.

(C) If you operate a new or reconstructed source that starts up on or after April 12, 2007, or a solid fuel boiler or liquid fuel boiler that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP on or after April 12, 2007, you must either:

(*1*) Comply with the final total chlorine emission standards under §§63.1216, 63.1217, 63.1219, 63.1220, and 63.1221 upon startup. If the final standard is more stringent than the standard proposed for your source on April 20, 2004, however, and if you start operations before October 14, 2008, you may comply with the proposed standard until October 14, 2008, after which you must comply with the final standard; or

(*2*) Submit an eligibility demonstration for review and approval under this section 12 months prior to startup.

(3) The operating requirements in the eligibility demonstration are applicable requirements for purposes of parts 70 and 71 of this chapter and will be incorporated in the title V permit.

(f) *Testing requirements* —(1) *General.* You must comply with the requirements for comprehensive performance testing under §63.1207.

(2) *System removal efficiency.* (i) You must calculate the total chlorine removal efficiency of the combustor during each run of the comprehensive performance test.

(ii) You must calculate the average system removal efficiency as the average of the test run averages.

(iii) If your source does not control emissions of total chlorine, you must assume zero system removal efficiency.

(3) *Annual average HCl-equivalent emission rate limit.* If emissions during the comprehensive performance test exceed the annual average HCl-equivalent emission rate limit, eligibility for emission limits under this section is not affected. This emission rate limit is an annual average limit even though compliance is based on a 12-hour or (up to) an annual rolling average feedrate limit on total chlorine and chloride because the feedrate limit is also used for compliance assurance for the semivolatile metal emission standard

(4) *1-hour average HCl-equivalent emission rate limit.* Total chlorine emissions during each run of the comprehensive performance test cannot exceed the 1-hour average HCl-equivalent emission rate limit.

(5) *Test methods.* (i) If you operate a cement kiln or a combustor equipped with a dry acid gas scrubber, you must use EPA Method 320/321 or ASTM D 6735–01, or an equivalent method, to measure hydrogen chloride, and the back-half (caustic impingers) of Method 26/26A, or an equivalent method, to measure chlorine gas.

(ii) *Bromine and sulfur considerations.* If you operate an incinerator, boiler, or lightweight aggregate kiln and your feedstreams contain bromine or sulfur during the comprehensive performance test at levels specified under paragraph (e)(2)(ii)(B) of this section, you must use EPA Method 320/321 or ASTM D 6735–01, or an equivalent method, to measure hydrogen chloride, and Method 26/26A, or an equivalent method, to measure chlorine and hydrogen chloride, and determine your chlorine emissions as follows:

(A) You must determine your chlorine emissions to be the higher of the value measured by Method 26/26A as provided in appendix A–8, part 60 of this chapter, or an equivalent method, or the value calculated by the difference between the combined hydrogen chloride and chlorine levels measured by Method 26/26A as provided in appendix A–8, part 60 of this chapter, or an equivalent method, and the hydrogen chloride measurement from EPA Method 320/321 as provided in appendix A, part 63 of this chapter, or ASTM D 6735–01 as described under §63.1208(b)(5)(i)(C), or an equivalent method.

(B) The procedures under paragraph (f)(2)(ii) of this section for determining hydrogen chloride and chlorine emissions apply if you feed bromine or sulfur during the performance test at the levels specified in this paragraph (f)(5)(ii)(B):

(*1*) If the bromine/chlorine ratio in feedstreams is greater than 5 percent by mass; or

(*2*) If the sulfur/chlorine ratio in feedstreams is greater than 50 percent by mass.

(g) *Monitoring requirements* —(1) *General.* You must establish and comply with limits on the same operating parameters that apply to sources complying with the MACT standard for total chlorine under §63.1209(o), except that feedrate limits on total chlorine and chloride must be established according to paragraphs (g)(2) and (g)(3) of this section:

(2) *Feedrate limit to ensure compliance with the annual average HCl-equivalent emission rate limit.* (i) For sources subject to the feedrate limit for total chlorine and chloride under §63.1209(n)(4) to ensure compliance with the semivolatile metals standard:

(A) The feedrate limit (and averaging period) for total chlorine and chloride to ensure compliance with the annual average HCl-equivalent emission rate limit is the same as required by §63.1209(n)(4), except as provided by paragraph (g)(2)(i)(B) of this section.

(B) The numerical value of the total chlorine and chloride feedrate limit (i.e., not considering the averaging period) you establish under §63.1209(n)(4) must not exceed the value you calculate as the annual average HCl-equivalent emission rate limit (lb/hr) divided by [1 − system removal efficiency], where the system removal efficiency is calculated as prescribed by paragraph (f)(2) of this section.

(ii) For sources exempt from the feedrate limit for total chlorine and chloride under §63.1209(n)(4) because they comply with §63.1207(m)(2), the feedrate limit for total chlorine and chloride to ensure compliance with the annual average HCl-equivalent emission rate must be established as follows:

(A) You must establish an average period for the feedrate limit that does not exceed an annual rolling average;

(B) The numerical value of the total chlorine and chloride feedrate limit (i.e., not considering the averaging period) must not exceed the value you calculate as the annual average HCl-equivalent emission rate limit (lb/hr) divided by [1 − system removal efficiency], where the system removal efficiency is calculated as prescribed by paragraph (f)(2) of this section.

(C) You must calculate the initial rolling average as though you had selected a 12-hour rolling average, as provided by paragraph (b)(5)(i) of this section. You must calculate rolling averages thereafter as the average of the available one-minute values until enough one-minute values are available to calculate the rolling average period you select. At that time and thereafter, you update the rolling average feedrate each hour with a 60-minute average feedrate.

(3) *Feedrate limit to ensure compliance with the 1-hour average HCl-equivalent emission rate limit.* (i) You must establish an hourly rolling average feedrate limit on total chlorine and chloride to ensure compliance with the 1-hour

average HCl-equivalent emission rate limit unless you determine that the hourly rolling average feedrate limit is waived under paragraph (d) of this section.

(ii) You must calculate the hourly rolling average feedrate limit for total chlorine and chloride as the 1-hour average HCl-equivalent emission rate limit (lb/hr) divided by [1 − system removal efficiency], where the system removal efficiency is calculated as prescribed by paragraph (f)(2)(ii) of this section.

(h) *Changes* —(1) *Changes over which you have control* —(i) *Changes that would affect the HCl-equivalent emission rate limit.* (A) If you plan to change the design, operation, or maintenance of the facility in a manner than would decrease the annual average or 1-hour average HCl-equivalent emission rate limit, you must submit to the permitting authority prior to the change a revised eligibility demonstration documenting the lower emission rate limits and calculations of reduced total chlorine and chloride feedrate limits.

(B) If you plan to change the design, operation, or maintenance of the facility in a manner than would increase the annual average or 1-hour average HCl-equivalent emission rate limit, and you elect to increase your total chlorine and chloride feedrate limits. You must also submit to the permitting authority prior to the change a revised eligibility demonstration documenting the increased emission rate limits and calculations of the increased feedrate limits prior to the change.

(ii) *Changes that could affect system removal efficiency.* (A) If you plan to change the design, operation, or maintenance of the combustor in a manner than could decrease the system removal efficiency, you are subject to the requirements of §63.1206(b)(5) for conducting a performance test to reestablish the combustor's system removal efficiency and you must submit a revised eligibility demonstration documenting the lower system removal efficiency and the reduced feedrate limits on total chlorine and chloride.

(B) If you plan to change the design, operation, or maintenance of the combustor in a manner than could increase the system removal efficiency, and you elect to document the increased system removal efficiency to establish higher feedrate limits on total chlorine and chloride, you are subject to the requirements of §63.1206(b)(5) for conducting a performance test to reestablish the combustor's system removal efficiency. You must also submit to the permitting authority a revised eligibility demonstration documenting the higher system removal efficiency and the increased feedrate limits on total chlorine and chloride.

(2) *Changes over which you do not have control that may decrease the HCl-equivalent emission rate limits.* These requirements apply if you use a site-specific risk assessment under paragraph (c)(4) of this section to demonstrate eligibility for the health-based limits.

(i) *Proactive review* . You must submit for review and approval with each comprehensive performance test plan either a certification that the information used in your eligibility demonstration has not changed in a manner that would decrease the annual average or 1-hour average HCl-equivalent emission rate limit, or a revised eligibility demonstration.

(ii) *Reactive review.* If in the interim between your comprehensive performance tests you have reason to know of changes that would decrease the annual average or 1-hour average HCl-equivalent emission rate limit, you must submit a revised eligibility demonstration as soon as practicable but not more frequently than annually.

(iii) *Compliance schedule.* If you determine that you cannot demonstrate compliance with a lower annual average HCl-equivalent emission rate limit during the comprehensive performance test because you need additional time to complete changes to the design or operation of the source, you may request that the permitting authority grant you additional time to make those changes as quickly as practicable.

View or download PDF

Table 1 of §63.1215: Annual Average HCl-Equivalent Emssion Rate Limits (lb/hr)--Flat Terrain

	Distance to property boundary (m)											
Stack Diameter = 0.3 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
5	3.7E-01	4.9E-01	7.3E-01	9.1E-01	1.6E+00	2.3E+00	4.1E+00	5.7E+00	6.1E+00	1.0E+01	1.6E+01	2.9E+01
10	1.0E+00	1.0E+00	1.1E+00	1.5E+00	2.1E+00	2.7E+00	4.8E+00	5.7E+00	6.5E+00	1.1E+01	1.8E+01	3.2E+01
20	2.3E+00	2.3E+00	2.3E+00	2.3E+00	2.7E+00	3.7E+00	5.6E+00	7.4E+00	1.0E+01	1.9E+01	2.9E+01	5.2E+01
30	4.1E+00	4.1E+00	4.1E+00	4.2E+00	4.7E+00	6.0E+00	9.5E+00	1.3E+01	1.8E+01	3.3E+01	4.8E+01	7.9E+01
50	1.2E+01	1.2E+01	1.2E+01	1.2E+01	1.3E+01	1.5E+01	2.0E+01	2.8E+01	3.8E+01	7.1E+01	1.0E+02	1.6E+02
Stack Diameter = 0.5 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
5	6.5E-01	9.3E-01	1.4E+00	1.8E+00	3.0E+00	4.4E+00	7.2E+00	9.2E+00	1.3E+01	1.5E+01	2.0E+01	3.4E+01
10	1.4E+00	1.4E+00	1.8E+00	2.1E+00	3.9E+00	5.4E+00	8.3E+00	1.0E+01	1.3E+01	1.7E+01	2.3E+01	3.8E+01
20	3.7E+00	3.7E+00	3.7E+00	3.9E+00	4.9E+00	6.5E+00	8.5E+00	1.0E+01	1.3E+01	2.2E+01	3.2E+01	5.5E+01
30	5.5E+00	5.5E+00	5.5E+00	5.5E+00	5.6E+00	6.7E+00	1.0E+01	1.4E+01	1.9E+01	3.4E+01	4.9E+01	8.1E+01
50	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.5E+01	2.1E+01	2.8E+01	3.9E+01	7.2E+01	1.0E+02	1.6E+02
Stack Diameter = 1.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	3.2E+00	3.6E+00	4.0E+00	5.4E+00	9.6E+00	1.3E+01	1.8E+01	2.3E+01	2.8E+01	4.5E+01	5.3E+01	6.5E+01
20	5.9E+00	5.9E+00	5.9E+00	6.1E+00	9.6E+00	1.3E+01	1.8E+01	2.3E+01	2.8E+01	4.5E+01	5.3E+01	7.5E+01
30	1.0E+01	1.0E+01	1.0E+01	1.0E+01	1.2E+01	1.3E+01	1.8E+01	2.3E+01	2.8E+01	4.5E+01	6.1E+01	9.3E+01
50	1.8E+01	1.8E+01	1.8E+01	1.8E+01	1.8E+01	1.8E+01	2.3E+01	3.1E+01	4.2E+01	7.7E+01	1.1E+02	1.7E+02
70	7.4E+01	7.4E+01	7.4E+01	7.4E+01	7.4E+01	7.4E+01	8.0E+01	1.0E+02	1.4E+02	2.1E+02	2.7E+02	4.0E+02
Stack Diameter = 1.5 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	4.1E+00	5.3E+00	6.4E+00	7.9E+00	1.3E+01	2.1E+01	2.7E+01	3.6E+01	4.8E+01	7.6E+01	9.1E+01	1.1E+02
20	7.6E+00	7.6E+00	7.6E+00	7.9E+00	1.3E+01	2.1E+01	2.7E+01	3.6E+01	4.8E+01	7.6E+01	9.1E+01	1.2E+02
30	1.3E+01	1.3E+01	1.3E+01	1.3E+01	1.6E+01	2.1E+01	2.7E+01	3.6E+01	4.8E+01	7.6E+01	9.1E+01	1.2E+02
50	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.7E+01	3.6E+01	4.8E+01	8.6E+01	1.2E+02	1.8E+02
70	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.1E+02	1.4E+02	1.8E+02	3.0E+02	4.0E+02	5.8E+02
Stack Diameter = 2.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	5.0E+00	6.3E+00	7.7E+00	9.8E+00	1.7E+01	2.8E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	1.8E+02
20	9.3E+00	9.3E+00	9.4E+00	1.0E+01	1.7E+01	2.8E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	1.8E+02
30	1.6E+01	1.6E+01	1.6E+01	1.6E+01	1.9E+01	2.8E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	1.8E+02
50	2.9E+01	2.9E+01	2.9E+01	2.9E+01	2.9E+01	2.9E+01	3.3E+01	4.4E+01	5.9E+01	1.0E+02	1.4E+02	2.0E+02
70	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.4E+02	1.8E+02	2.3E+02	3.4E+02	4.3E+02	6.4E+02
100	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.0E+02	3.5E+02	5.2E+02	6.8E+02	8.2E+02
Stack Diameter = 3.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	6.5E+00	6.9E+00	7.7E+00	9.8E+00	2.2E+01	3.4E+01	5.4E+01	7.4E+01	9.8E+01	1.3E+02	1.6E+02	1.6E+02
20	1.6E+01	1.6E+01	1.7E+01	2.0E+01	2.5E+01	3.7E+01	5.6E+01	7.4E+01	9.8E+01	1.5E+02	2.1E+02	3.0E+02
30	2.0E+01	2.0E+01	2.0E+01	2.0E+01	2.5E+01	3.7E+01	5.6E+01	7.4E+01	9.8E+01	1.7E+02	2.2E+02	3.0E+02
50	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.4E+01	5.1E+01	5.6E+01	7.4E+01	9.8E+01	1.7E+02	2.2E+02	3.0E+02
70	2.3E+02	2.3E+02	2.3E+02	2.3E+02	2.3E+02	2.4E+02	2.4E+02	2.9E+02	3.6E+02	4.1E+02	5.0E+02	7.0E+02
100	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.5E+02	3.9E+02	6.3E+02	7.5E+02	8.7E+02
Stack Diameter = 4.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
30	2.5E+01	2.5E+01	2.5E+01	2.5E+01	3.4E+01	5.6E+01	8.1E+01	1.1E+02	1.4E+02	2.2E+02	2.8E+02	4.3E+02
50	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.3E+01	6.2E+01	8.1E+01	1.1E+02	1.4E+02	2.4E+02	3.1E+02	4.4E+02
70	2.6E+02	2.6E+02	2.6E+02	2.6E+02	2.7E+02	2.8E+02	3.3E+02	4.6E+02	4.8E+02	5.0E+02	5.7E+02	7.7E+02
100	5.7E+02	5.7E+02	5.7E+02	5.7E+02	5.7E+02	5.7E+02	5.7E+02	5.7E+02	5.8E+02	8.6E+02	9.3E+02	1.1E+03

Table 2 of §63.1215: Annual Average HCl-Equivalent Emission Rate Limits (lbs/hr)--Simple Elevated Terrain

	Distance to property boundary (m)											
Stack Diameter = 0.3 m												
Stack height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
5	1.3E-01	1.8E-01	2.5E-01	3.7E-01	6.4E-01	8.9E-01	1.4E+00	2.0E+00	3.1E+00	7.7E+00	1.3E+01	2.6E+01
10	3.8E-01	3.8E-01	4.4E-01	6.1E-01	6.4E-01	8.9E-01	1.4E+00	2.0E+00	3.1E+00	7.7E+00	1.3E+01	2.6E+01
20	1.1E+00	1.1E+00	1.1E+00	1.2E+00	1.2E+00	1.5E+00	2.3E+00	3.4E+00	5.2E+00	1.2E+01	2.0E+01	3.9E+01
30	2.4E+00	2.4E+00	2.4E+00	2.4E+00	2.7E+00	3.5E+00	4.2E+00	5.2E+00	7.0E+00	1.5E+01	2.6E+01	4.9E+01
50	7.7E+00	7.7E+00	7.7E+00	7.7E+00	7.7E+00	8.6E+00	8.6E+00	8.6E+00	8.6E+00	2.0E+01	3.4E+01	6.5E+01
Stack Diameter = 0.5 m												
Stack height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
5	1.8E-01	2.6E-01	3.5E-01	5.6E-01	1.4E+00	1.6E+00	2.3E+00	3.4E+00	5.2E+00	9.6E+00	1.5E+01	2.8E+01
10	5.3E-01	5.3E-01	6.1E-01	8.5E-01	1.4E+00	1.6E+00	2.3E+00	3.4E+00	5.2E+00	9.6E+00	1.5E+01	2.8E+01
20	1.5E+00	1.5E+00	1.5E+00	1.5E+00	1.5E+00	1.6E+00	2.3E+00	3.4E+00	5.2E+00	1.2E+01	2.0E+01	3.9E+01
30	2.9E+00	2.9E+00	2.9E+00	2.9E+00	2.9E+00	3.5E+00	4.2E+00	5.5E+00	8.1E+00	1.7E+01	2.8E+01	5.2E+01
50	8.0E+00	8.0E+00	8.0E+00	8.0E+00	8.0E+00	8.8E+00	1.2E+01	1.2E+01	1.2E+01	2.3E+01	3.7E+01	6.9E+01
Stack Diameter = 1.0 m												
Stack height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	9.7E-01	9.7E-01	1.1E+00	1.7E+00	3.7E+00	3.7E+00	4.2E+00	5.5E+00	7.5E+00	1.5E+01	2.3E+01	4.1E+01
20	2.7E+00	2.7E+00	2.7E+00	3.0E+00	3.7E+00	3.7E+00	4.2E+00	5.5E+00	7.5E+00	1.5E+01	2.3E+01	4.3E+01
30	4.3E+00	4.3E+00	4.3E+00	4.3E+00	4.3E+00	4.3E+00	4.3E+00	5.5E+00	8.1E+00	1.7E+01	2.8E+01	5.2E+01
50	9.5E+00	9.5E+00	9.5E+00	9.5E+00	9.5E+00	9.5E+00	1.2E+01	1.4E+01	1.6E+01	3.1E+01	4.8E+01	8.3E+01
70	4.0E+01	4.0E+01	4.0E+01	4.0E+01	4.0E+01	4.0E+01	4.0E+01	4.1E+01	4.1E+01	4.1E+01	5.8E+01	9.8E+01
Stack Diameter = 1.5 m												
Stack height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	2.0E+00	2.0E+00	2.3E+00	3.4E+00	5.1E+00	6.0E+00	6.0E+00	6.6E+00	9.3E+00	1.9E+01	3.0E+01	5.4E+01
20	3.5E+00	3.5E+00	3.5E+00	3.9E+00	5.1E+00	6.0E+00	6.0E+00	6.6E+00	9.3E+00	1.9E+01	3.0E+01	5.4E+01
30	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.0E+00	6.6E+00	9.3E+00	1.9E+01	3.0E+01	5.5E+01
50	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.2E+01	1.4E+01	1.6E+01	3.1E+01	4.8E+01	8.3E+01
70	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	5.1E+01	6.2E+01	7.8E+01	1.2E+02
Stack Diameter = 2.0 m												
Stack height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	2.6E+00	2.6E+00	3.0E+00	4.2E+00	6.3E+00	9.2E+00	9.2E+00	1.0E+01	1.4E+01	2.5E+01	3.7E+01	6.3E+01
20	4.2E+00	4.2E+00	4.2E+00	4.7E+00	6.3E+00	9.2E+00	9.2E+00	1.0E+01	1.4E+01	2.5E+01	3.7E+01	6.3E+01
30	8.4E+00	8.4E+00	8.4E+00	8.4E+00	9.2E+00	9.2E+00	9.2E+00	1.0E+01	1.4E+01	2.5E+01	3.7E+01	6.3E+01
50	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.4E+01	1.5E+01	1.6E+01	3.1E+01	4.8E+01	8.3E+01
70	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	5.9E+01	7.0E+01	1.0E+02	1.5E+02
100	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	8.2E+01	1.1E+02	1.7E+02
Stack Diameter = 3.0 m												
Stack height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	3.3E+00	3.4E+00	3.9E+00	5.5E+00	1.1E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	3.3E+01	5.0E+01	8.6E+01
20	6.5E+00	6.5E+00	6.5E+00	7.6E+00	1.1E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	3.3E+01	5.0E+01	8.6E+01
30	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.2E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	3.3E+01	5.0E+01	8.6E+01
50	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	1.7E+01	3.3E+01	5.0E+01	8.6E+01
70	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.0E+01	8.5E+01	1.2E+02	1.9E+02
100	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.9E+02	2.4E+02
Stack Diameter = 4.0 m												
Stack height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
30	1.3E+01	1.3E+01	1.3E+01	1.3E+01	1.3E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	4.0E+01	6.0E+01	9.8E+01
50	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	2.1E+01	4.0E+01	6.0E+01	9.8E+01
70	1.1E+02	1.1E+02	1.1E+02	1.1E+02	1.1E+02	1.1E+02	1.1E+02	1.1E+02	1.1E+02	1.1E+02	1.5E+02	2.3E+02
100	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.5E+02	2.2E+02	3.4E+02

View or download PDF

Table 3 of §63.1215: 1-Hour Average HCl-Equivalent Emission Rates (lb/hr)--Flat Terrain

	Distance to property boundary (m)											
Stack Diameter = 0.3 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
5	3.9E+00	5.1E+00	7.6E+00	9.6E+00	1.6E+01	2.4E+01	4.3E+01	5.3E+01	6.2E+01	1.1E+02	1.7E+02	3.1E+02
10	9.7E+00	9.8E+00	1.1E+01	1.4E+01	2.0E+01	2.6E+01	4.6E+01	5.3E+01	6.2E+01	1.1E+02	1.7E+02	3.1E+02
20	2.2E+01	2.2E+01	2.2E+01	2.2E+01	2.5E+01	3.5E+01	5.3E+01	7.0E+01	9.5E+01	1.8E+02	2.8E+02	4.9E+02
30	3.9E+01	3.9E+01	3.9E+01	4.0E+01	4.4E+01	5.7E+01	9.0E+01	1.2E+02	1.7E+02	3.1E+02	4.5E+02	7.5E+02
50	1.2E+02	1.2E+02	1.2E+02	1.2E+02	1.2E+02	1.4E+02	1.9E+02	2.6E+02	3.6E+02	6.7E+02	9.7E+02	1.5E+03
Stack Diameter = 0.5 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
5	6.9E+00	9.8E+00	1.5E+01	1.8E+01	3.2E+01	4.6E+01	7.5E+01	9.7E+01	1.2E+02	1.6E+02	2.1E+02	3.6E+02
10	1.3E+01	1.4E+01	1.5E+01	2.0E+01	3.7E+01	5.1E+01	7.9E+01	9.7E+01	1.2E+02	1.6E+02	2.2E+02	3.6E+02
20	3.5E+01	3.5E+01	3.5E+01	3.6E+01	4.6E+01	6.2E+01	8.1E+01	9.7E+01	1.2E+02	2.1E+02	3.0E+02	5.2E+02
30	5.2E+01	5.2E+01	5.2E+01	5.2E+01	5.3E+01	6.4E+01	9.8E+01	1.3E+02	1.8E+02	3.2E+02	4.7E+02	7.7E+02
50	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.4E+02	2.0E+02	2.7E+02	3.7E+02	6.8E+02	9.7E+02	1.5E+03
Stack Diameter = 1.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	3.0E+01	3.4E+01	3.8E+01	5.1E+01	9.0E+01	1.2E+02	1.7E+02	2.2E+02	2.7E+02	4.3E+02	5.0E+02	6.1E+02
20	5.5E+01	5.5E+01	5.5E+01	5.8E+01	9.0E+01	1.2E+02	1.7E+02	2.2E+02	2.7E+02	4.3E+02	5.0E+02	7.1E+02
30	9.6E+01	9.5E+01	9.6E+01	9.6E+01	1.1E+02	1.2E+02	1.7E+02	2.2E+02	2.7E+02	4.3E+02	5.8E+02	8.8E+02
50	1.7E+02	1.7E+02	1.7E+02	1.7E+02	1.7E+02	1.7E+02	2.2E+02	2.9E+02	4.0E+02	7.3E+02	1.0E+03	1.6E+03
70	7.0E+02	7.0E+02	7.0E+02	7.0E+02	7.0E+02	7.0E+02	7.6E+02	9.8E+02	1.3E+03	2.0E+03	2.6E+03	3.8E+03
Stack Diameter = 1.5 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	3.9E+01	5.0E+01	6.1E+01	7.5E+01	1.2E+02	2.0E+02	2.5E+02	3.4E+02	4.6E+02	7.2E+02	8.6E+02	1.0E+03
20	7.1E+01	7.1E+01	7.2E+01	7.5E+01	1.2E+02	2.0E+02	2.5E+02	3.4E+02	4.6E+02	7.2E+02	8.6E+02	1.1E+03
30	1.2E+02	1.2E+02	1.2E+02	1.2E+02	1.5E+02	2.0E+02	2.5E+02	3.4E+02	4.6E+02	7.2E+02	8.6E+02	1.1E+03
50	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.5E+02	3.4E+02	4.6E+02	8.1E+02	1.1E+03	1.7E+03
70	9.6E+02	9.6E+02	9.6E+02	9.6E+02	9.6E+02	9.6E+02	1.0E+03	1.3E+03	1.7E+03	2.9E+03	3.8E+03	5.5E+03
Stack Diameter = 2.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	4.7E+01	6.0E+01	7.3E+01	9.2E+01	1.7E+02	2.6E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.5E+03
20	8.8E+01	8.8E+01	8.8E+01	9.4E+01	1.7E+02	2.6E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.7E+03
30	1.5E+02	1.5E+02	1.5E+02	1.5E+02	1.8E+02	2.6E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.7E+03
50	2.7E+02	2.7E+02	2.7E+02	2.7E+02	2.7E+02	2.7E+02	3.2E+02	4.2E+02	5.6E+02	9.7E+02	1.3E+03	1.9E+03
70	1.3E+03	1.3E+03	1.3E+03	1.3E+03	1.3E+03	1.3E+03	1.4E+03	1.7E+03	2.2E+03	3.2E+03	4.1E+03	5.9E+03
100	2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	2.8E+03	3.3E+03	5.0E+03	6.5E+03	7.7E+03
Stack Diameter = 3.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
10	6.2E+01	6.5E+01	7.3E+01	9.2E+01	2.1E+02	3.3E+02	5.1E+02	7.0E+02	9.3E+02	1.2E+03	1.5E+03	1.5E+03
20	1.5E+02	1.5E+02	1.6E+02	1.9E+02	2.4E+02	3.5E+02	5.3E+02	7.0E+02	9.3E+02	1.4E+03	2.0E+03	2.8E+03
30	1.9E+02	1.9E+02	1.9E+02	1.9E+02	2.4E+02	3.5E+02	5.3E+02	7.0E+02	9.3E+02	1.8E+03	2.1E+03	2.8E+03
50	4.0E+02	4.0E+02	4.0E+02	4.0E+02	4.2E+02	4.8E+02	5.3E+02	7.0E+02	9.3E+02	1.6E+03	2.1E+03	2.8E+03
70	2.2E+03	2.2E+03	2.2E+03	2.2E+03	2.2E+03	2.3E+03	2.3E+03	2.6E+03	3.4E+03	3.9E+03	4.7E+03	6.6E+03
100	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.3E+03	3.7E+03	6.0E+03	7.1E+03	8.2E+03
Stack Diameter = 4.0 m												
Stack Height (m)	**30**	**50**	**70**	**100**	**200**	**300**	**500**	**700**	**1000**	**2000**	**3000**	**5000**
30	2.3E+02	2.3E+02	2.3E+02	2.4E+02	3.2E+02	5.3E+02	7.7E+02	1.0E+03	1.3E+03	2.1E+03	2.6E+03	4.1E+03
50	4.8E+02	4.8E+02	4.8E+02	4.8E+02	5.0E+02	5.8E+02	7.7E+02	1.0E+03	1.3E+03	2.3E+03	3.0E+03	4.2E+03
70	2.4E+03	2.4E+03	2.4E+03	2.4E+03	2.5E+03	2.6E+03	3.2E+03	4.3E+03	4.5E+03	4.7E+03	5.4E+03	7.2E+03
100	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.4E+03	5.5E+03	8.1E+03	8.8E+03	1.0E+04

View or download PDF

Table 4 of §63.1215: 1-Hour Average HCl-Equivalent Emission Rate Limits (lb/hr)--Simple Elevated Terrain

	Distance to property boundary (m)																	
Stack Diameter = 0.3 m																		
Stack Height (m)	30	50	70	100	200	300	500	700	1000	2000	3000	5000
5	1.4E+00	1.9E+00	2.6E+00	3.8E+00	6.0E+00	9.4E+00	1.5E+01	2.1E+01	3.3E+01	6.1E+01	1.4E+02	2.7E+02
10	4.0E+00	4.0E+00	4.6E+00	6.4E+00	6.8E+00	9.4E+00	1.5E+01	2.1E+01	3.3E+01	6.1E+01	1.4E+02	2.7E+02
20	1.1E+01	1.1E+01	1.1E+01	1.1E+01	1.2E+01	1.5E+01	2.4E+01	3.5E+01	5.4E+01	1.3E+02	2.1E+02	4.0E+02
30	2.3E+01	2.3E+01	2.3E+01	2.3E+01	2.6E+01	3.3E+01	4.4E+01	5.5E+01	7.3E+01	1.6E+02	2.7E+02	5.2E+02
50	7.3E+01	7.3E+01	7.3E+01	7.3E+01	7.3E+01	8.3E+01	9.0E+01	9.0E+01	9.0E+01	2.1E+02	3.5E+02	6.8E+02
Stack Diameter = 0.5 m												
Stack Height (m)	30	50	70	100	200	300	500	700	1000	2000	3000	5000
5	1.5E+00	2.7E+00	3.7E+00	5.9E+00	1.4E+01	1.7E+01	2.4E+01	3.5E+01	5.4E+01	1.0E+02	1.6E+02	3.0E+02
10	5.8E+00	5.8E+00	6.4E+00	8.9E+00	1.4E+01	1.7E+01	2.4E+01	3.5E+01	5.4E+01	1.0E+02	1.6E+02	3.0E+02
20	1.6E+01	1.6E+01	1.6E+01	1.6E+01	1.6E+01	1.7E+01	2.4E+01	3.5E+01	5.4E+01	1.3E+02	2.1E+02	4.0E+02
30	2.7E+01	2.7E+01	2.7E+01	2.7E+01	2.7E+01	3.3E+01	4.4E+01	5.6E+01	8.5E+01	1.8E+02	2.9E+02	5.6E+02
50	7.6E+01	7.6E+01	7.6E+01	7.6E+01	7.6E+01	8.3E+01	1.1E+02	1.3E+02	1.3E+02	2.4E+02	3.9E+02	7.2E+02
Stack Diameter = 1.0 m												
Stack Height (m)	30	50	70	100	200	300	500	700	1000	2000	3000	5000
10	1.0E+01	1.0E+01	1.2E+01	1.7E+01	3.6E+01	3.9E+01	4.5E+01	5.8E+01	7.9E+01	1.6E+02	2.4E+02	4.4E+02
20	2.6E+01	2.6E+01	2.6E+01	2.8E+01	3.6E+01	3.9E+01	4.6E+01	5.8E+01	7.9E+01	1.6E+02	2.4E+02	4.5E+02
30	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.2E+01	4.5E+01	5.8E+01	8.5E+01	1.8E+02	2.9E+02	5.5E+02
50	8.8E+01	8.9E+01	8.9E+01	8.9E+01	8.9E+01	8.9E+01	1.1E+02	1.4E+02	1.7E+02	3.3E+02	5.0E+02	8.7E+02
70	3.8E+02	3.8E+02	3.8E+02	3.8E+02	3.8E+02	3.8E+02	3.8E+02	4.0E+02	4.1E+02	4.3E+02	6.1E+02	1.0E+03
Stack Diameter = 1.5 m												
Stack Height (m)	30	50	70	100	200	300	500	700	1000	2000	3000	5000
10	2.1E+01	2.1E+01	2.5E+01	3.6E+01	5.4E+01	6.3E+01	6.3E+01	6.9E+01	9.8E+01	2.0E+02	3.2E+02	5.7E+02
20	3.3E+01	3.9E+01	3.3E+01	3.7E+01	5.4E+01	6.3E+01	6.3E+01	6.9E+01	9.8E+01	2.0E+02	3.2E+02	5.7E+02
30	6.3E+01	6.3E+01	6.3E+01	6.3E+01	6.3E+01	6.3E+01	6.3E+01	6.9E+01	9.8E+01	2.0E+02	3.2E+02	5.8E+02
50	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.0E+02	1.2E+02	1.4E+02	1.7E+02	3.3E+02	5.0E+02	8.7E+02
70	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	4.8E+02	6.5E+02	8.2E+02	1.3E+03
Stack Diameter = 2.0 m												
Stack Height (m)	30	50	70	100	200	300	500	700	1000	2000	3000	5000
10	2.7E+01	2.7E+01	3.2E+01	4.4E+01	6.8E+01	9.7E+01	9.7E+01	1.1E+02	1.0E+02	2.0E+02	3.0E+02	6.5E+02
20	4.0E+01	4.0E+01	4.0E+01	4.4E+01	6.8E+01	9.7E+01	9.7E+01	1.1E+02	1.5E+02	2.0E+02	3.0E+02	6.5E+02
30	7.9E+01	7.9E+01	7.9E+01	7.9E+01	9.1E+01	9.7E+01	9.7E+01	1.1E+02	1.5E+02	2.0E+02	3.0E+02	6.5E+02
50	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.3E+02	1.4E+02	1.7E+02	3.3E+02	5.0E+02	8.7E+02
70	5.8E+02	5.8E+02	5.8E+02	5.8E+02	5.8E+02	5.8E+02	5.8E+02	5.8E+02	5.8E+02	7.3E+02	1.1E+03	1.5E+03
100	8.6E+02	8.6E+02	8.6E+02	8.6E+02	8.6E+02	8.6E+02	8.6E+02	8.6E+02	8.6E+02	8.6E+02	1.2E+03	1.7E+03
Stack Diameter = 3.0 m												
Stack Height (m)	30	50	70	100	200	300	500	700	1000	2000	3000	5000
10	3.5E+01	4.1E+01	5.8E+01	1.2E+02	1.6E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	3.5E+02	5.2E+02	9.0E+02
20	6.2E+01	6.2E+01	7.2E+01	1.2E+02	1.6E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	3.5E+02	5.2E+02	9.0E+02
30	1.0E+02	1.0E+02	1.0E+02	1.2E+02	1.6E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	3.5E+02	5.2E+02	9.0E+02
50	1.8E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	1.8E+02	3.5E+02	5.2E+02	9.0E+02
70	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	7.5E+02	8.9E+02	1.3E+03	2.0E+03
100	1.4E+03	1.4E+03	1.4E+03	1.4E+03	1.4E+03	1.4E+03	1.4E+03	1.4E+03	1.4E+03	1.4E+03	2.0E+03	2.8E+03
Stack Diameter = 4.0 m												
Stack Height (m)	30	50	70	100	200	300	500	700	1000	2000	3000	5000
30	1.2E+02	1.2E+02	1.2E+02	1.2E+02	1.4E+02	2.0E+02	2.2E+02	2.2E+02	2.2E+02	4.2E+02	6.3E+02	1.0E+03
50	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.2E+02	2.2E+02	4.2E+02	6.3E+02	1.0E+03
70	1.0E+03	1.0E+03	1.0E+03	1.0E+03	1.0E+03	1.0E+03	1.0E+03	1.0E+03	1.0E+03	1.1E+03	1.6E+03	2.4E+03
100	1.6E+03	1.6E+03	1.6E+03	1.6E+03	1.6E+03	1.6E+03	1.6E+03	1.6E+03	1.6E+03	1.6E+03	2.3E+03	3.6E+03

[View or download PDF]

[70 FR 59565, Oct. 12, 2005, as amended at 73 FR 18982, Apr. 8, 2008; 73 FR 64097, Oct. 28, 2008]

Emissions Standards and Operating Limits for Solid Fuel Boilers, Liquid Fuel Boilers, and Hydrochloric Acid Production Furnaces

§ 63.1216 What are the standards for solid fuel boilers that burn hazardous waste?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans, either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (a)(5) of this section;

(2) Mercury in excess of 11 µgm/dscm corrected to 7 percent oxygen;

(3) For cadmium and lead combined, except for an area source as defined under §63.2, emissions in excess of 180 µgm/dscm, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium combined, except for an area source as defined under §63.2, emissions in excess of 380 µgm/dscm, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine combined, except for an area source as defined under §63.2, emissions in excess of 440 parts per million by volume, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) For particulate matter, except for an area source as defined under §63.2 or as provided by paragraph (e) of this section, emissions in excess of 68 mg/dscm corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans, either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (b)(5) of this section;

(2) Mercury in excess of 11 µgm/dscm corrected to 7 percent oxygen;

(3) For cadmium and lead combined, except for an area source as defined under §63.2, emissions in excess of 180 µgm/dscm, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium combined, except for an area source as defined under §63.2, emissions in excess of 190 µgm/dscm, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine combined, except for an area source as defined under §63.2, emissions in excess of 73 parts per million by volume, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) For particulate matter, except for an area source as defined under §63.2 or as provided by paragraph (e) of this section, emissions in excess of 34 mg/dscm corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a DRE of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE = [1 - (W_{out} \div W_{in})] \times 100\%$$

Where:

W_{in}= mass feedrate of one POHC in a waste feedstream; and

W_{out}= mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a DRE of 99.9999% for each POHC that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo- *p* -dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the POHCs in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) *Alternative to the particulate matter standard* —(1) *General.* In lieu of complying with the particulate matter standards of this section, you may elect to comply with the following alternative metal emission control requirement:

(2) *Alternative metal emission control requirements for existing solid fuel boilers.* (i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 180 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(ii) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 380 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(3) Alternative metal emission control requirements for new solid fuel boilers. (i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 180 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(ii) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 190 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(4) *Operating limits.* Semivolatile and low volatile metal operating parameter limits must be established to ensure compliance with the alternative emission limitations described in paragraphs (e)(2) and (e)(3) of this section pursuant to §63.1209(n), except that semivolatile metal feedrate limits apply to lead, cadmium, and selenium, combined, and low volatile metal feedrate limits apply to arsenic, beryllium, chromium, antimony, cobalt, manganese, and nickel, combined.

(f) *Elective standards for area sources.* Area sources as defined under §63.2 are subject to the standards for cadmium and lead, the standards for arsenic, beryllium, and chromium, the standards for hydrogen chloride and chlorine, and the standards for particulate matter under this section if they elect under §266.100(b)(3) of this chapter to comply with those standards in lieu of the standards under 40 CFR 266.105, 266.106, and 266.107 to control those pollutants.

[70 FR 59565, Oct. 12, 2005]

§ 63.1217 What are the standards for liquid fuel boilers that burn hazardous waste?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1)(i) Dioxins and furans in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, for liquid fuel boilers equipped with a dry air pollution control system; or

(ii) Either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (a)(5) of this section for sources not equipped with a dry air pollution control system;

(iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this emission limit;

(2) For mercury, except as provided for in paragraph (a)(2)(iii) of this section:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 19 µgm/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;

(ii) When you burn hazardous waste with an as-fired heating value 10,000 Btu/lb or greater, emissions in excess of 4.2×10^{-5}lbs mercury attributable to the hazardous waste per million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;

(iii) The boiler operated by Diversified Scientific Services, Inc. with EPA identification number TND982109142, and which burns radioactive waste mixed with hazardous waste, must comply with the mercury emission standard under §63.1219(a)(2);

(3) For cadmium and lead combined, except for an area source as defined under §63.2,

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 150 µgm/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;

(ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 8.2×10^{-5}lbs combined cadmium and lead emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;

(4) For chromium, except for an area source as defined under §63.2:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 370 µgm/dscm, corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 1.3×10^{-4}lbs chromium emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine, except for an area source as defined under §63.2:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 31 parts per million by volume, combined emissions, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 5.1×10^{-2}lbs combined emissions of hydrogen chloride and chlorine gas attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(7) For particulate matter, except for an area source as defined under §63.2 or as provided by paragraph (e) of this section, emissions in excess of 80 mg/dscm corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1)(i) Dioxins and furans in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, for liquid fuel boilers equipped with a dry air pollution control system; or

(ii) Either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (b)(5) of this section for sources not equipped with a dry air pollution control system;

(iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this emission limit;

(2) For mercury:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 6.8 µgm/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;

(ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 1.2×10^{-6}lbs mercury emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;

(3) For cadmium and lead combined, except for an area source as defined under §63.2:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 78 µgm/dscm, corrected to 7 percent oxygen, on an (not-to-exceed) annual averaging period;

(ii) When you burn hazardous waste with an as-fired heating value greater than or equal to 10,000 Btu/lb, emissions in excess of 6.2×10^{-6}lbs combined cadmium and lead emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste on an (not-to-exceed) annual averaging period;

(4) For chromium, except for an area source as defined under §63.2:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 12 µgm/dscm, corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of 1.4×10^{-5}lbs chromium emissions attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those

runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine, except for an area source as defined under §63.2:

(i) When you burn hazardous waste with an as-fired heating value less than 10,000 Btu/lb, emissions in excess of 31 parts per million by volume, combined emissions, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with an as-fired heating value of 10,000 Btu/lb or greater, emissions in excess of $5.1 \times^{-2}$lbs combined emissions of hydrogen chloride and chlorine gas attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(7) For particulate matter, except for an area source as defined under §63.2 or as provided by paragraph (e) of this section, emissions in excess of 20 mg/dscm corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a DRE of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE = [1 - (W_{out} \div W_{in})] \times 100\%$$

Where:

W_{in}= mass feedrate of one POHC in a waste feedstream; and

W_{out}= mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a DRE of 99.9999% for each POHC that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo- *p* -dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the POHCs in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) *Alternative to the particulate matter standard* —(1) *General.* In lieu of complying with the particulate matter standards of this section, you may elect to comply with the following alternative metal emission control requirement:

(2) *Alternative metal emission control requirements for existing liquid fuel boilers.* (i) When you burn hazardous waste with a heating value less than 10,000 Btu/lb:

(A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium, combined, in excess of 150 µgm/dscm, corrected to 7 percent oxygen; and

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel, combined, in excess of 370 µgm/dscm, corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with a heating value of 10,000 Btu/lb or greater:

(A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain in excess of 8.2×10^{-5}lbs combined emissions of cadmium, lead, and selenium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain either in excess of 1.3×10^{-4}lbs combined emissions of antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(3) *Alternative metal emission control requirements for new liquid fuel boilers.* (i) When you burn hazardous waste with a heating value less than 10,000 Btu/lb:

(A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium, combined, in excess of 78 µgm/dscm, corrected to 7 percent oxygen; and

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel, combined, in excess of 12 µgm/dscm, corrected to 7 percent oxygen;

(ii) When you burn hazardous waste with a heating value greater than or equal to 10,000 Btu/lb:

(A) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain in excess of 6.2×10^{-6}lbs combined emissions of cadmium, lead, and selenium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(B) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain either in excess of 1.4×10^{-5}lbs combined emissions of antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(4) *Operating limits.* Semivolatile and low volatile metal operating parameter limits must be established to ensure compliance with the alternative emission limitations described in paragraphs (e)(2) and (e)(3) of this section pursuant to §63.1209(n), except that semivolatile metal feedrate limits apply to lead, cadmium, and selenium, combined, and low volatile metal feedrate limits apply to arsenic, beryllium, chromium, antimony, cobalt, manganese, and nickel, combined.

(f) *Elective standards for area sources.* Area sources as defined under §63.2 are subject to the standards for cadmium and lead, the standards for chromium, the standards for hydrogen chloride and chlorine, and the standards for particulate matter under this section if they elect under §266.100(b)(3) of this chapter to comply with those standards in lieu of the standards under 40 CFR 266.105, 266.106, and 266.107 to control those pollutants.

[70 FR 59567, Oct. 12, 2005, as amended at 73 FR 18983, Apr. 8, 2008]

§ 63.1218 What are the standards for hydrochloric acid production furnaces that burn hazardous waste?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans, either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (a)(5) of this section;

(2) For mercury, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section;

(3) For lead and cadmium, except for an area source as defined under §63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section;

(4) For arsenic, beryllium, and chromium, except for an area source as defined under §63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine gas, either:

(i) Emission in excess of 150 parts per million by volume, combined emissions, expressed as a chloride (Cl(−)equivalent, dry basis and corrected to 7 percent oxygen; or

(ii) Emissions greater than the levels that would be emitted if the source is achieving a system removal efficiency (SRE) of less than 99.923 percent for total chlorine and chloride fed to the combustor. You must calculate SRE from the following equation:

$$SRE = [1 - (Cl_{out} / Cl_{in})] \times 100\%$$

Where:

Cl in = mass feedrate of total chlorine or chloride in all feedstreams, reported as chloride; and

Cl out = mass emission rate of hydrogen chloride and chlorine gas, reported as chloride, in exhaust emissions prior to release to the atmosphere.

(7) For particulate matter, except for an area source as defined under §63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (a)(6) of this section.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans, either carbon monoxide or hydrocarbon emissions in excess of the limits provided by paragraph (b)(5) of this section;

(2) For mercury, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this section;

(3) For lead and cadmium, except for an area source as defined under §63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this section;

(4) For arsenic, beryllium, and chromium, except for an area source as defined under §63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this section;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those

runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) For hydrogen chloride and chlorine gas, either:

(i) Emission in excess of 25 parts per million by volume, combined emissions, expressed as a chloride (Cl(−)equivalent, dry basis and corrected to 7 percent oxygen; or

(ii) Emissions greater than the levels that would be emitted if the source is achieving a system removal efficiency (SRE) of less than 99.987 percent for total chlorine and chloride fed to the combustor. You must calculate SRE from the following equation:

$$SRE = [1 - (Cl_{out} / Cl_{in})] \times 100\%$$

Where:

Cl in = mass feedrate of total chlorine or chloride in all feedstreams, reported as chloride; and

Cl out = mass emission rate of hydrogen chloride and chlorine gas, reported as chloride, in exhaust emissions prior to release to the atmosphere.

(7) For particulate matter, except for an area source as defined under §63.2, hydrogen chloride and chlorine gas emissions in excess of the levels provided by paragraph (b)(6) of this section.

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a DRE of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE = [1 - (W_{out} / W_{in})] \times 100\%$$

Where:

Win = mass feedrate of one POHC in a waste feedstream; and

Wout = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a DRE of 99.9999% for each POHC that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo- *p* -dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs).* (i) You must treat the POHCs in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures.* The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) *Elective standards for area sources.* Area sources as defined under §63.2 are subject to the standards for cadmium and lead, the standards for arsenic, beryllium, and chromium, the standards for hydrogen chloride and

chlorine, and the standards for particulate matter under this section if they elect under §266.100(b)(3) of this chapter to comply with those standards in lieu of the standards under 40 CFR 266.105, 266.106, and 266.107 to control those pollutants.

[70 FR 59569, Oct. 12, 2005]

Replacement Emissions Standards and Operating Limits for Incinerators, Cement Kilns, and Lightweight Aggregate Kilns

§ 63.1219 What are the replacement standards for hazardous waste incinerators?

(a) *Emission limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1) For dioxins and furans:

(i) For incinerators equipped with either a waste heat boiler or dry air pollution control system, either:

(A) Emissions in excess of 0.20 ng TEQ/dscm, corrected to 7 percent oxygen; or

(B) Emissions in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400 °F or lower based on the average of the test run average temperatures. (For purposes of compliance, operation of a wet particulate matter control device is presumed to meet the 400 °F or lower requirement);

(ii) Emissions in excess of 0.40 ng TEQ/dscm, corrected to 7 percent oxygen, for incinerators not equipped with either a waste heat boiler or dry air pollution control system;

(iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this standard;

(2) Mercury in excess of 130 µgm/dscm, corrected to 7 percent oxygen;

(3) Cadmium and lead in excess of 230 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 92 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrogen chloride and chlorine gas (total chlorine) in excess of 32 parts per million by volume, combined emissions, expressed as a chloride (Cl^-) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Except as provided by paragraph (e) of this section, particulate matter in excess of 0.013 gr/dscf corrected to 7 percent oxygen.

(b) *Emission limits for new sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere that contain:

(1)(i) Dioxins and furans in excess of 0.11 ng TEQ/dscm corrected to 7 percent oxygen for incinerators equipped with either a waste heat boiler or dry air pollution control system; or

(ii) Dioxins and furans in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen for sources not equipped with either a waste heat boiler or dry air pollution control system;

(iii) A source equipped with a wet air pollution control system followed by a dry air pollution control system is not considered to be a dry air pollution control system, and a source equipped with a dry air pollution control system followed by a wet air pollution control system is considered to be a dry air pollution control system for purposes of this standard;

(2) Mercury in excess of 8.1 µgm/dscm, corrected to 7 percent oxygen;

(3) Cadmium and lead in excess of 10 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(4) Arsenic, beryllium, and chromium in excess of 23 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(5) For carbon monoxide and hydrocarbons, either:

(i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrogen chloride and chlorine gas in excess of 21 parts per million by volume, combined emissions, expressed as a chloride (Cl(−)) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Except as provided by paragraph (e) of this section, particulate matter emissions in excess of 0.0016 gr/dscf corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE = [1 - (W_{out} / W_{in})] \times 100\%$$

Where:

W_{in}= mass feedrate of one POHC in a waste feedstream; and

W_{out}= mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE* . If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a DRE of 99.9999% for each POHC that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo- *p* -dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituent (POHC)* . (i) You must treat each POHC in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures* . The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(e) *Alternative to the particulate matter standard.* —(1) *General* . In lieu of complying with the particulate matter standards of this section, you may elect to comply with the following alternative metal emission control requirement:

(2) *Alternative metal emission control requirements for existing incinerators* . (i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 230 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(ii) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 92 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(3) *Alternative metal emission control requirements for new incinerators* . (i) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain cadmium, lead, and selenium in excess of 10 µgm/dscm, combined emissions, corrected to 7 percent oxygen; and,

(ii) You must not discharge or cause combustion gases to be emitted into the atmosphere that contain antimony, arsenic, beryllium, chromium, cobalt, manganese, and nickel in excess of 23 µgm/dscm, combined emissions, corrected to 7 percent oxygen.

(4) *Operating limits* . Semivolatile and low volatile metal operating parameter limits must be established to ensure compliance with the alternative emission limitations described in paragraphs (e)(2) and (e)(3) of this section pursuant to §63.1209(n), except that semivolatile metal feedrate limits apply to lead, cadmium, and selenium, combined, and low volatile metal feedrate limits apply to arsenic, beryllium, chromium, antimony, cobalt, manganese, and nickel, combined.

[70 FR 59570, Oct. 12, 2005, as amended at 73 FR 64097, Oct. 28, 2008]

§ 63.1220 What are the replacement standards for hazardous waste burning cement kilns?

(a) *Emission and hazardous waste feed limits for existing sources.* You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:

(1) For dioxins and furans, either:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures;

(2) For mercury, both:

(i) An average as-fired concentration of mercury in all hazardous waste feedstreams in excess of 3.0 parts per million by weight; and

(ii) Either:

(A) Emissions in excess of 120 µg/dscm, corrected to 7 percent oxygen, or

(B) A hazardous waste feed maximum theoretical emission concentration (MTEC) in excess of 120 µg/dscm;

(3) For cadmium and lead, both:

(i) Emissions in excess of 7.6×10^{-4}lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(ii) Emissions in excess of 330 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium, both:

(i) Emissions in excess of 2.1×10^{-5}lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(ii) Emissions in excess of 56 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons* . (i) For kilns equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Carbon monoxide in the by-pass duct or mid-kiln gas sampling system in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(i)(B) of this section, you must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons in the by-pass duct or mid-kiln gas sampling system do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B) Hydrocarbons in the by-pass duct or midkiln gas sampling system in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane;

(ii) For kilns not equipped with a by-pass duct or midkiln gas sampling system, either:

(A) Hydrocarbons in the main stack in excess of 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B) Carbon monoxide in the main stack in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii)(A) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons in the main stack do not exceed 20 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(6) Hydrogen chloride and chlorine gas in excess of 120 parts per million by volume, combined emissions, expressed as a chloride (Cl(-)) equivalent, dry basis, corrected to 7 percent oxygen; and

(7) For particulate matter, both:

(i) Emissions in excess of 0.028 gr/dscf corrected to 7 percent oxygen; and

(ii) Opacity greater than 20 percent, unless your source is equipped with a bag leak detection system under §63.1206(c)(8) or a particulate matter detection system under §63.1206(c)(9).

(b) *Emission and hazardous waste feed limits for new sources* . You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:

(1) For dioxins and furans, either:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the initial dry particulate matter control device is 400 °F or lower based on the average of the test run average temperatures;

(2) For mercury, both:

(i) An average as-fired concentration of mercury in all hazardous waste feedstreams in excess of 1.9 parts per million by weight; and

(ii) Either:

(A) Emissions in excess of 120 µg/dscm, corrected to 7 percent oxygen, or

(B) A hazardous waste feed maximum theoretical emission concentration (MTEC) in excess of 120 µg/dscm;

(3) For cadmium and lead, both:

(i) Emissions in excess of 6.2×10^{-5}lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(ii) Emissions in excess of 180 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium, both:

(i) Emissions in excess of 1.5×10^{-5}lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(ii) Emissions in excess of 54 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons.* (i) For kilns equipped with a by-pass duct or midkiln gas sampling system, carbon monoxide and hydrocarbons emissions are limited in both the bypass duct or midkiln gas sampling system and the main stack as follows:

(A) Emissions in the by-pass or midkiln gas sampling system are limited to either:

(*1*) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(i)(A)(*2*) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(*2*) Hydrocarbons in the by-pass duct or midkiln gas sampling system in excess of 10 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; and

(B) Hydrocarbons in the main stack are limited, if construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(ii) For kilns not equipped with a by-pass duct or midkiln gas sampling system, hydrocarbons and carbon monoxide are limited in the main stack to either:

(A) Hydrocarbons not exceeding 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(B)(*1*) Carbon monoxide not exceeding 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen; and

(*2*) Hydrocarbons not exceeding 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7); and

(*3*) If construction of the kiln commenced after April 19, 1996 at a plant site where a cement kiln (whether burning hazardous waste or not) did not previously exist, hydrocarbons are limited to 50 parts per million by volume, over a 30-day block average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

(6) Hydrogen chloride and chlorine gas in excess of 86 parts per million by volume, combined emissions, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) For particulate matter, both:

(i) Emissions in excess of 0.0069 gr/dscf corrected to 7 percent oxygen; and

(ii) Opacity greater than 20 percent, unless your source is equipped with a bag leak detection system under §63.1206(c)(8) or a particulate matter detection system under §63.1206(c)(9).

(c) *Destruction and removal efficiency (DRE) standard* —(1) *99.99% DRE.* Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE = [1 - (W_{out}/W_{in})] \times 100\%$$

Where:

W_{in}= mass feedrate of one POHC in a waste feedstream; and

W_{out}= mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE.* If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a DRE of 99.9999% for each POHC that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo- *p* -dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituent (POHC).* (i) You must treat each POHC in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Cement kilns with in-line kiln raw mills* —(1) *General.* (i) You must conduct performance testing when the raw mill is on-line and when the mill is off-line to demonstrate compliance with the emission standards, and you must establish separate operating parameter limits under §63.1209 for each mode of operation, except as provided by paragraphs (d)(1)(iv) and (d)(1)(v) of this section.

(ii) You must document in the operating record each time you change from one mode of operation to the alternate mode and begin complying with the operating parameter limits for that alternate mode of operation.

(iii) You must calculate rolling averages for operating parameter limits as provided by §63.1209(q)(2).

(iv) If your in-line kiln raw mill has dual stacks, you may assume that the dioxin/furan emission levels in the by-pass stack and the operating parameter limits determined during performance testing of the by-pass stack when the raw mill is off-line are the same as when the mill is on-line.

(v) In lieu of conducting a performance test to demonstrate compliance with the dioxin/furan emission standards for the mode of operation when the raw mill is on-line, you may specify in the performance test workplan and Notification of Compliance the same operating parameter limits required under §63.1209(k) for the mode of operation when the raw mill is on-line as you establish during performance testing for the mode of operation when the raw mill is off-line.

(2) *Emissions averaging.* You may comply with the mercury, semivolatile metal, low volatile metal, and hydrogen chloride/chlorine gas emission standards on a time-weighted average basis under the following procedures:

(i) *Averaging methodology.* You must calculate the time-weighted average emission concentration with the following equation:

C_{total}= {Cmill-off× (Tmill-off/(Tmill-off+ Tmill-on))} + {Cmill-on× (Tmill-on/(Tmill-off+ Tmill-on))}

Where:

C_{total}= time-weighted average concentration of a regulated constituent considering both raw mill on time and off time;

Cmill-off= average performance test concentration of regulated constituent with the raw mill off-line;

Cmill-on= average performance test concentration of regulated constituent with the raw mill on-line;

Tmill-off= time when kiln gases are not routed through the raw mill; and

Tmill-on= time when kiln gases are routed through the raw mill.

(ii) *Compliance.* (A) If you use this emission averaging provision, you must document in the operating record compliance with the emission standards on an annual basis by using the equation provided by paragraph (d)(2) of this section.

(B) Compliance is based on one-year block averages beginning on the day you submit the initial notification of compliance.

(iii) *Notification.* (A) If you elect to document compliance with one or more emission standards using this emission averaging provision, you must notify the Administrator in the initial comprehensive performance test plan submitted under §63.1207(e).

(B) You must include historical raw mill operation data in the performance test plan to estimate future raw mill down-time and document in the performance test plan that estimated emissions and estimated raw mill down-time will not result in an exceedance of an emission standard on an annual basis.

(C) You must document in the notification of compliance submitted under §63.1207(j) that an emission standard will not be exceeded based on the documented emissions from the performance test and predicted raw mill down-time.

(e) *Preheater or preheater/precalciner kilns with dual stacks* —(1) *General.* You must conduct performance testing on each stack to demonstrate compliance with the emission standards, and you must establish operating parameter limits under §63.1209 for each stack, except as provided by paragraph (d)(1)(iv) of this section for dioxin/furan emissions testing and operating parameter limits for the by-pass stack of in-line raw mills.

(2) *Emissions averaging.* You may comply with the mercury, semivolatile metal, low volatile metal, and hydrogen chloride/chlorine gas emission standards specified in this section on a gas flowrate-weighted average basis under the following procedures:

(i) *Averaging methodology.* You must calculate the gas flowrate-weighted average emission concentration using the following equation:

C_{tot}= {C_{main}× (Q_{main}/(Q_{main}+ Q_{bypass}))} + {C_{bypass}× (Q_{bypass}/(Q_{main}+ Q_{bypass}))}

Where:

C_{tot}= gas flowrate-weighted average concentration of the regulated constituent;

C_{main}= average performance test concentration demonstrated in the main stack;

C_{bypass}= average performance test concentration demonstrated in the bypass stack;

Q_{main}= volumetric flowrate of main stack effluent gas; and

Q_{bypass}= volumetric flowrate of bypass effluent gas.

(ii) *Compliance.* (A) You must demonstrate compliance with the emission standard(s) using the emission concentrations determined from the performance tests and the equation provided by paragraph (e)(1) of this section; and

(B) You must develop operating parameter limits for bypass stack and main stack flowrates that ensure the emission concentrations calculated with the equation in paragraph (e)(1) of this section do not exceed the emission standards on a 12-hour rolling average basis. You must include these flowrate limits in the Notification of Compliance.

(iii) *Notification* . If you elect to document compliance under this emissions averaging provision, you must:

(A) Notify the Administrator in the initial comprehensive performance test plan submitted under §63.1207(e). The performance test plan must include, at a minimum, information describing the flowrate limits established under paragraph (e)(2)(ii)(B) of this section; and

(B) Document in the Notification of Compliance submitted under §63.1207(j) the demonstrated gas flowrate-weighted average emissions that you calculate with the equation provided by paragraph (e)(2) of this section.

(f) *Significant figures* . The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

(g) [Reserved]

(h) When you comply with the particulate matter requirements of paragraphs (a)(7) or (b)(7) of this section, you are exempt from the New Source Performance Standard for particulate matter and opacity under §60.60 of this chapter.

[70 FR 59571, Oct. 12, 2005, as amended at 71 FR 62394, Oct. 25, 2006; 73 FR 18983, Apr. 8, 2008; 73 FR 64097, Oct. 28, 2008]

§ 63.1221 What are the replacement standards for hazardous waste burning lightweight aggregate kilns?

(a) *Emission and hazardous waste feed limits for existing sources* . You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:

(1) For dioxins and furans, either:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Rapid quench of the combustion gas temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system that immediately follows the last combustion chamber) to 400 °F or lower based on the average of the test run average temperatures. You must also notify in writing the RCRA authority that you are complying with this option;

(2) For mercury, either:

(i) Emissions in excess of 120 µgm/dscm, corrected to 7 percent oxygen; or

(ii) A hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) in excess of 120 µgm/dscm;

(3) For cadmium and lead, both:

(i) Emissions in excess of 3.0×10^{-4}lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(ii) Emissions in excess of 250 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium, both:

(i) In excess of 9.5×10^{-5}lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(ii) Emissions in excess of 110 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons* . (i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (a)(5)(ii) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 20 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrogen chloride and chlorine gas in excess of 600 parts per million by volume, combined emissions, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter emissions in excess of 0.025 gr/dscf, corrected to 7 percent oxygen.

(b) *Emission and hazardous waste feed limits for new sources* . You must not discharge or cause combustion gases to be emitted into the atmosphere or feed hazardous waste that contain:

(1) For dioxins and furans, either:

(i) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or

(ii) Rapid quench of the combustion gas temperature at the exit of the (last) combustion chamber (or exit of any waste heat recovery system that immediately follows the last combustion chamber) to 400 °F or lower based on the average of the test run average temperatures. You must also notify in writing the RCRA authority that you are complying with this option;

(2) For mercury, either:

(i) Emissions in excess of 120 µgm/dscm, corrected to 7 percent oxygen; or

(ii) A hazardous waste feedrate corresponding to a maximum theoretical emission concentration (MTEC) in excess of 120 µgm/dscm;

(3) For cadmium and lead, both:

(i) Emissions in excess of 3.7×10^{-5}lbs combined emissions of cadmium and lead attributable to the hazardous waste per million Btu heat input from the hazardous waste; and

(ii) Emissions in excess of 43 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(4) For arsenic, beryllium, and chromium, both:

(i) In excess of 3.3×10^{-5} lbs combined emissions of arsenic, beryllium, and chromium attributable to the hazardous waste per million Btu heat input from the hazardous waste;

(ii) Emissions in excess of 110 µgm/dscm, combined emissions, corrected to 7 percent oxygen;

(5) *Carbon monoxide and hydrocarbons* . (i) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If you elect to comply with this carbon monoxide standard rather than the hydrocarbon standard under paragraph (b)(5)(ii) of this section, you also must document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by §63.1206(b)(7), hydrocarbons do not exceed 20 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; or

(ii) Hydrocarbons in excess of 20 parts per million by volume, over an hourly rolling average, dry basis, corrected to 7 percent oxygen, and reported as propane;

(6) Hydrogen chloride and chlorine gas in excess of 600 parts per million by volume, combined emissions, expressed as a chloride (Cl(-)) equivalent, dry basis and corrected to 7 percent oxygen; and

(7) Particulate matter emissions in excess of 0.0098 gr/dscf corrected to 7 percent oxygen.

(c) *Destruction and removal efficiency (DRE) standard.* —(1) *99.99% DRE* . Except as provided in paragraph (c)(2) of this section, you must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) designated under paragraph (c)(3) of this section. You must calculate DRE for each POHC from the following equation:

$$DRE = [1 - (W_{out} / Win)] \times 100\%$$

Where:

W_{in}= mass feedrate of one POHC in a waste feedstream; and

W_{out}= mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) *99.9999% DRE* . If you burn the dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 (see §261.31 of this chapter), you must achieve a destruction and removal efficiency (DRE) of 99.9999% for each POHC that you designate under paragraph (c)(3) of this section. You must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-dioxins and dibenzofurans. You must use the equation in paragraph (c)(1) of this section to calculate DRE for each POHC. In addition, you must notify the Administrator of your intent to burn hazardous wastes F020, F021, F022, F023, F026, or F027.

(3) *Principal organic hazardous constituents (POHCs)* . (i) You must treat each POHC in the waste feed that you specify under paragraph (c)(3)(ii) of this section to the extent required by paragraphs (c)(1) and (c)(2) of this section.

(ii) You must specify one or more POHCs that are representative of the most difficult to destroy organic compounds in your hazardous waste feedstream. You must base this specification on the degree of difficulty of incineration of the organic constituents in the hazardous waste and on their concentration or mass in the hazardous waste feed, considering the results of hazardous waste analyses or other data and information.

(d) *Significant figures* . The emission limits provided by paragraphs (a) and (b) of this section are presented with two significant figures. Although you must perform intermediate calculations using at least three significant figures, you may round the resultant emission levels to two significant figures to document compliance.

[70 FR 59574, Oct. 12, 2005]

Table 1 to Subpart EEE of Part 63—General Provisions Applicable to Subpart EEE

Reference	Applies to subpart EEE	Explanation
63.1	Yes.	
63.2	Yes.	
63.3	Yes.	
63.4	Yes.	
63.5	Yes.	
63.6(a), (b), (c), (d), and (e)	Yes.	
63.6(f)	Yes	Except that the performance test requirements of Sec. 63.1207 apply instead of §63.6(f)(2)(iii)(B).
63.6(g) and (h)	Yes.	
63.6(i)	Yes	Section 63.1213 specifies that the compliance date may also be extended for inability to install necessary emission control equipment by the compliance date because of implementation of pollution prevention or waste minimization controls.
63.6(j)	Yes.	
63.7(a)	Yes	Except §63.1207(e)(3) allows you to petition the Administrator under §63.7(h) to provide an extension of time to conduct a performance test.
63.7(b)	Yes	Except §63.1207(e) requires you to submit the site-specific test plan for approval at least one year before the comprehensive performance test is scheduled to begin.
63.7(c)	Yes	Except §63.1207(e) requires you to submit the site-specific test plan (including the quality assurance provisions under §63.7(c)) for approval at least one year before the comprehensive performance test is scheduled to begin.
63.7(d)	Yes.	
63.7(e)	Yes	Except §63.1207 prescribes operations during performance testing and §63.1209 specifies operating limits that will be established during performance testing (such that testing is likely to be representative of the extreme range of normal performance).
63.7(f)	Yes.	
63.7(g)	Yes	Except §63.1207(j) requiring that you submit the results of the performance test (and the notification of compliance) within 90 days of completing the test, unless the Administrator grants a time extension, applies instead of §63.7(g)(1).
63.7(h)	Yes	Except §63.1207(c)(2) allows data in lieu of the initial comprehensive performance test, and §63.1207(m) provides a waiver of certain performance tests. You must submit requests for these waivers with the site-specific test plan.
63.8(a) and (b)	Yes.	
63.8(c)	Yes	Except: (1) §63.1211(c) that requires you to install, calibrate, and operate CMS by the compliance date applies instead of §63.8(c)(3); and (2) the performance specifications for CO, HC, and O2 CEMS in subpart B, of this chapter requiring that the detectors measure the sample concentration at least once every 15 seconds for calculating an average emission level once every 60 seconds apply instead of §63.8(c)(4)(ii).
63.8(d)	Yes.	
63.8(e)	Yes	Except §63.1207(e) requiring you to submit the site-specific comprehensive performance test plan and the CMS performance evaluation test plan for approval at least one year prior to the planned test

		date applies instead of §§63.8(e)(2) and (3)(iii).
63.8(f) and (g)	Yes.	
63.9(a)	Yes.	
63.9(b)	Yes	*Note:* Section 63.9(b)(1)(ii) pertains to notification requirements for area sources that become a major source, and §63.9(b)(2)(v) requires a major source determination. Although area sources are subject to all provisions of this subpart (Subpart EEE), these sections nonetheless apply because the major source determination may affect the applicability of part 63 standards or title V permit requirements to other sources (i.e., other than a hazardous waste combustor) of hazardous air pollutants at the facility.
63.9(c) and (d)	Yes.	
63.9(e)	Yes	Except §63.1207(e) which requires you to submit the comprehensive performance test plan for approval one year prior to the planned performance test date applies instead of §63.9(e).
63.9(f)	Yes	Section 63.9(f) applies if you are allowed under §63.1209(a)(1)(v) to use visible determination of opacity for compliance in lieu of a COMS.
63.9(g)	Yes	Except §63.9(g)(2) pertaining to COMS does not apply.
63.9(h)	Yes	Except §63.1207(j) requiring you to submit the notification of compliance within 90 days of completing a performance test unless the Administrator grants a time extension applies instead of §63.9(h)(2)(iii). Note: Even though area sources are subject to this subpart, the major source determination required by §63.9(h)(2)(i)(E) is applicable to hazardous waste combustors for the reasons discussed above.
63.9(i) and (j)	Yes.	
63.10	Yes	Except reports of performance test results required under §63.10(d)(2) may be submitted up to 90 days after completion of the test.
63.11	No.	
63.12–63.15	Yes.	

[67 FR 6994, Feb. 14, 2002]

Appendix to Subpart EEE of Part 63—Quality Assurance Procedures for Continuous Emissions Monitors Used for Hazardous Waste Combustors

1. Applicability and Principle

1.1 Applicability. These quality assurance requirements are used to evaluate the effectiveness of quality control (QC) and quality assurance (QA) procedures and the quality of data produced by continuous emission monitoring systems (CEMS) that are used for determining compliance with the emission standards on a continuous basis as specified in the applicable regulation. The QA procedures specified by these requirements represent the minimum requirements necessary for the control and assessment of the quality of CEMS data used to demonstrate compliance with the emission standards provided under this subpart EEE of part 63. Owners and operators must meet these minimum requirements and are encouraged to develop and implement a more extensive QA program. These requirements supersede those found in part 60, Appendix F, of this chapter. Appendix F does not apply to hazardous waste-burning devices.

1.2 Principle. The QA procedures consist of two distinct and equally important functions. One function is the assessment of the quality of the CEMS data by estimating accuracy. The other function is the control and improvement of the quality of the CEMS data by implementing QC policies and corrective actions. These two functions form a control loop. When the assessment function indicates that the data quality is inadequate, the source must immediately stop burning hazardous waste. The CEM data control effort must be increased until the data quality is acceptable before hazardous waste burning can resume.

a. In order to provide uniformity in the assessment and reporting of data quality, this procedure explicitly specifies the assessment methods for response drift and accuracy. The methods are based on procedures included in the applicable performance specifications provided in appendix B to part 60 of this chapter. These procedures also require the analysis of the EPA audit samples concurrent with certain reference method (RM) analyses as specified in the applicable RM's.

b. Because the control and corrective action function encompasses a variety of policies, specifications, standards, and corrective measures, this procedure treats QC requirements in general terms to allow each source owner or operator to develop a QC system that is most effective and efficient for the circumstances.

2. Definitions

2.1 *Continuous Emission Monitoring System (CEMS).* The total equipment required for the determination of a pollutant concentration. The system consists of the following major subsystems:

2.1.1 *Sample Interface.* That portion of the CEMS used for one or more of the following: sample acquisition, sample transport, and sample conditioning, or protection of the monitor from the effects of the stack effluent.

2.1.2 *Pollutant Analyzer.* That portion of the CEMS that senses the pollutant concentration and generates a proportional output.

2.1.3 *Diluent Analyzer.* That portion of the CEMS that senses the diluent gas (O2) and generates an output proportional to the gas concentration.

2.1.4 *Data Recorder.* That portion of the CEMS that provides a permanent record of the analyzer output. The data recorder may provide automatic data reduction and CEMS control capabilities.

2.2 *Relative Accuracy (RA).* The absolute mean difference between the pollutant concentration determined by the CEMS and the value determined by the reference method (RM) plus the 2.5 percent error confidence coefficient of a series of test divided by the mean of the RM tests or the applicable emission limit.

2.3 *Calibration Drift (CD).* The difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.

2.4 *Zero Drift (ZD).* The difference in CEMS output readings at the zero pollutant level after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.

2.5 *Calibration Standard.* Calibration standards produce a known and unchanging response when presented to the pollutant analyzer portion of the CEMS, and are used to calibrate the drift or response of the analyzer.

2.6 *Relative Accuracy Test Audit (RATA).* Comparison of CEMS measurements to reference method measurements in order to evaluate relative accuracy following procedures and specification given in the appropriate performance specification.

2.7 *Absolute Calibration Audit (ACA).* Equivalent to calibration error (CE) test defined in the appropriate performance specification using NIST traceable calibration standards to challenge the CEMS and assess accuracy.

2.8 *Rolling Average.* The average emissions, based on some (specified) time period, calculated every minute from a one-minute average of four measurements taken at 15-second intervals.

3. QA/QC Requirements

3.1 QC Requirements. a. Each owner or operator must develop and implement a QC program. At a minimum, each QC program must include written procedures describing in detail complete, step-by-step procedures and operations for the following activities.

1. Checks for component failures, leaks, and other abnormal conditions.

2. Calibration of CEMS.

3. CD determination and adjustment of CEMS.

4. Integration of CEMS with the automatic waste feed cutoff (AWFCO) system.

5. Preventive Maintenance of CEMS (including spare parts inventory).

6. Data recording, calculations, and reporting.

7. Checks of record keeping.

8. Accuracy audit procedures, including sampling and analysis methods.

9. Program of corrective action for malfunctioning CEMS.

10. Operator training and certification.

11. Maintaining and ensuring current certification or naming of cylinder gasses, metal solutions, and particulate samples used for audit and accuracy tests, daily checks, and calibrations.

b. Whenever excessive inaccuracies occur for two consecutive quarters, the current written procedures must be revised or the CEMS modified or replaced to correct the deficiency causing the excessive inaccuracies. These written procedures must be kept on record and available for inspection by the enforcement agency.

3.2 QA Requirements. Each source owner or operator must develop and implement a QA plan that includes, at a minimum, the following.

1. QA responsibilities (including maintaining records, preparing reports, reviewing reports).

2. Schedules for the daily checks, periodic audits, and preventive maintenance.

3. Check lists and data sheets.

4. Preventive maintenance procedures.

5. Description of the media, format, and location of all records and reports.

6. Provisions for a review of the CEMS data at least once a year. Based on the results of the review, the owner or operator must revise or update the QA plan, if necessary.

4. CD and ZD Assessment and Daily System Audit

4.1 *CD and ZD Requirement.* Owners and operators must check, record, and quantify the ZD and the CD at least once daily (approximately 24 hours) in accordance with the method prescribed by the manufacturer. The CEMS calibration must, at a minimum, be adjusted whenever the daily ZD or CD exceeds the limits in the Performance Specifications. If, on any given ZD and/or CD check the ZD and/or CD exceed(s) two times the limits in the Performance Specifications, or if the cumulative adjustment to the ZD and/or CD (see Section 4.2) exceed(s) three times the limits in the Performance Specifications, hazardous waste burning must immediately cease and the CEMS must be serviced and recalibrated. Hazardous waste burning cannot resume until the owner or operator documents that the CEMS is in compliance with the Performance Specifications by carrying out an ACA.

4.2 *Recording Requirements for Automatic ZD and CD Adjusting Monitors.* Monitors that automatically adjust the data to the corrected calibration values must record the unadjusted concentration measurement prior to resetting the calibration, if performed, or record the amount of the adjustment.

4.3 *Daily System Audit.* The audit must include a review of the calibration check data, an inspection of the recording system, an inspection of the control panel warning lights, and an inspection of the sample transport and interface system (e.g., flowmeters, filters, etc.) as appropriate.

4.4 *Data Recording and Reporting.* All measurements from the CEMS must be retained in the operating record for at least 5 years.

5. Performance Evaluation for CO, O_2, and HC CEMS

Carbon Monoxide (CO), Oxygen (O_2), and Hydrocarbon (HC) CEMS. An Absolute Calibration Audit (ACA) must be conducted quarterly, and a Relative Accuracy Test Audit (RATA) (if applicable, see sections 5.1 and 5.2) must be conducted yearly. An Interference Response Tests must be performed whenever an ACA or a RATA is conducted. When a performance test is also required under §63.1207 to document compliance with emission standards, the RATA must coincide with the performance test. The audits must be conducted as follows.

5.1 *Relative Accuracy Test Audit (RATA).* This requirement applies to $O_2$and CO CEMS. The RATA must be conducted at least yearly. Conduct the RATA as described in the RA test procedure (or alternate procedures section) described in the applicable Performance Specifications. In addition, analyze the appropriate performance audit samples received from the EPA as described in the applicable sampling methods.

5.2 *Absolute Calibration Audit (ACA).* The ACA must be conducted at least quarterly except in a quarter when a RATA (if applicable, see section 5.1) is conducted instead. Conduct an ACA as described in the calibration error (CE) test procedure described in the applicable Performance Specifications.

5.3 *Interference Response Test.* The interference response test must be conducted whenever an ACA or RATA is conducted. Conduct an interference response test as described in the applicable Performance Specifications.

5.4 *Excessive Audit Inaccuracy.* If the RA from the RATA or the CE from the ACA exceeds the criteria in the applicable Performance Specifications, hazardous waste burning must cease immediately. Hazardous waste burning cannot resume until the owner or operator takes corrective measures and audit the CEMS with a RATA to document that the CEMS is operating within the specifications.

6. Other Requirements

6.1 *Performance Specifications.* CEMS used by owners and operators of HWCs must comply with the following performance specifications in appendix B to part 60 of this chapter:

Table I: Performance Specifications for CEMS

CEMS	Performance specification
Carbon monoxide	4B
Oxygen	4B
Total hydrocarbons	8A

6.2 *Downtime due to Calibration.* Facilities may continue to burn hazardous waste for a maximum of 20 minutes while calibrating the CEMS. If all CEMS are calibrated at once, the facility must have twenty minutes to calibrate all the CEMS. If CEMS are calibrated individually, the facility must have twenty minutes to calibrate each CEMS. If the CEMS are calibrated individually, other CEMS must be operational while the individual CEMS is being calibrated.

6.3 Span of the CEMS.

6.3.1 *CO CEMS.* The CO CEM must have two ranges, a low range with a span of 200 ppmv and a high range with a span of 3000 ppmv at an oxygen correction factor of 1. A one-range CEM may be used, but it must meet the performance specifications for the low range in the specified span of the low range.

6.3.2 *$O_{2\,CEMS}$*. The O_2CEM must have a span of 25 percent. The span may be higher than 25 percent if the O_2concentration at the sampling point is greater than 25 percent.

6.3.3 *HC CEMS.* The HC CEM must have a span of 100 ppmv, expressed as propane, at an oxygen correction factor of 1.

6.3.4 *CEMS Span Values.* When the Oxygen Correction Factor is Greater than 2. When an owner or operator installs a CEMS at a location of high ambient air dilution, i.e., where the maximum oxygen correction factor as determined by the permitting agency is greater than 2, the owner or operator must install a CEM with a lower span(s), proportionate to the larger oxygen correction factor, than those specified above.

6.3.5 *Use of Alternative Spans.* Owner or operators may request approval to use alternative spans and ranges to those specified. Alternate spans must be approved in writing in advance by the Administrator. In considering approval of alternative spans and ranges, the Administrator will consider that measurements beyond the span will be recorded as values at the maximum span for purposes of calculating rolling averages.

6.3.6 *Documentation of Span Values.* The span value must be documented by the CEMS manufacturer with laboratory data.

6.4.1 *Moisture Correction.* Method 4 of appendix A, part 60 of this chapter, must be used to determine moisture content of the stack gasses.

6.4.2 *Oxygen Correction Factor.* Measured pollutant levels must be corrected for the amount of oxygen in the stack according to the following formula:

$$P_c = P_m \times 14/(E - Y)$$

Where:

P_c= concentration of the pollutant or standard corrected to 7 percent oxygen, dry basis;

P_m= measured concentration of the pollutant, dry basis;

E = volume fraction of oxygen in the combustion air fed into the device, on a dry basis (normally 21 percent or 0.21 if only air is fed);

Y = measured fraction of oxygen on a dry basis at the sampling point.

The oxygen correction factor is:

$$OCF = 14/(E - Y)$$

6.4.3 *Temperature Correction.* Correction values for temperature are obtainable from standard reference materials.

6.5 *Rolling Average.* A rolling average is the arithmetic average of all one-minute averages over the averaging period.

6.5.1 *One-Minute Average for CO and HHC CEMS.* One-minute averages are the arithmetic average of the four most recent 15-second observations and must be calculated using the following equation:

$$\bar{c} = \sum_{i=1}^{4} \frac{c_i}{4}$$

Where:

c= the one minute average

c_i= a fifteen-second observation from the CEM

Fifteen second observations must not be rounded or smoothed. Fifteen-second observations may be disregarded only as a result of a failure in the CEMS and allowed in the source's quality assurance plan at the time of the CEMS failure. One-minute averages must not be rounded, smoothed, or disregarded.

6.5.2 Ten Minute Rolling Average Equation. The ten minute rolling average must be calculated using the following equation:

$$C_{RA} = \sum_{i=1}^{10} \frac{\overline{c}_i}{10}$$

Where:

C_{RA}= The concentration of the standard, expressed as a rolling average

c_i= a one minute average

6.5.3 *Hourly Rolling Average Equation for CO and THC CEMS and Operating Parameter Limits.* The rolling average, based on a specific number integer of hours, must be calculated using the following equation:

$$C_{RA} = \sum_{i=1}^{60} \frac{\overline{c}_i}{60}$$

Where:

c_{RA}= The concentration of the standard, expressed as a rolling average

c_i= a one minute average

6.5.4 Averaging Periods for CEMS other than CO and THC. The averaging period for CEMS other than CO and THC CEMS must be calculated as a rolling average of all one-hour values over the averaging period. An hourly average is comprised of 4 measurements taken at equally spaced time intervals, or at most every 15 minutes. Fewer than 4 measurements might be available within an hour for reasons such as facility downtime or CEMS calibration. If at least two measurements (30 minutes of data) are available, an hourly average must be calculated. The *n* -hour rolling average is calculated by averaging the *n* most recent hourly averages.

6.6 Units of the Standards for the Purposes of Recording and Reporting Emissions. Emissions must be recorded and reported expressed after correcting for oxygen, temperature, and moisture. Emissions must be reported in metric, but may also be reported in the English system of units, at 7 percent oxygen, 20 °C, and on a dry basis.

6.7 Rounding and Significant Figures. Emissions must be rounded to two significant figures using ASTM procedure E–29–90 or its successor. Rounding must be avoided prior to rounding for the reported value.

7. Bibliography

1. 40 CFR part 60, appendix F, “Quality Assurance Procedures: Procedure 1. Quality Assurance Requirements for Gas continuous Emission Monitoring Systems Used For Compliance Determination”.

[64 FR 53038, Sept. 30, 1999, as amended at 65 FR 42301, July 10, 2000]

SECTION SS 40 CFR Part 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(vi) Existing residential emergency stationary RICE located at an area source of HAP emissions;

(vii) Existing commercial emergency stationary RICE located at an area source of HAP emissions; or

(viii) Existing institutional emergency stationary RICE located at an area source of HAP emissions.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an

existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6602 What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[75 FR 51589, Aug. 20, 2010]

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

C_i= concentration of CO or formaldehyde at the control device inlet,

C_o= concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2concentration is measured in lieu of oxygen concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific $F_o$value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209\, F_d}{F_c} \qquad \text{(Eq. 2)}$$

Where:

F_o= Fuel factor based on the ratio of oxygen volume to the ultimate CO_2volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c= Ratio of the volume of CO_2produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

X_{co2}= CO_2correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

(iii) Calculate the $NO_X$and SO_2gas concentrations adjusted to 15 percent O_2using CO_2as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

$\%CO_2$= Measured CO_2concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A

written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (5) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start landfill or digester gas stationary RICE located at an area source of HAP emissions;

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) *Requirements for emergency stationary RICE.* (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

(2) If you own or operate an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed prior to June 12, 2006, you must operate the engine according to the conditions described in paragraphs (f)(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs (f)(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.

(iii) You may operate your emergency stationary RICE for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101–549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, *etc.* Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the

requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines

originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011]

Table 1ato Subpart ZZZZ of Part 63— Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after

	percent or more until June 15, 2007 or	which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions and Existing Spark Ignition 4SRB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions and existing 4SRB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O2 and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O2 and using NSCR.	a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O2 and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of	Comply with any operating limitations approved by the Administrator.

formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O2 and not using NSCR.	

[76 FR 12867, Mar. 9, 2011]

Table 2ato Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2bto Subpart ZZZZ of Part 63— Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing Compression Ignition Stationary RICE >500 HP, and Existing 4SLB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and compression ignition stationary RICE located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; existing compression ignition stationary RICE >500 HP; and existing 4SLB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

[75 FR 51593, Aug. 20, 2010, as amended at 76 FR 12867, Mar. 9, 2011]

Table 2cto Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start	a. Change oil and filter every 500 hours of	Minimize the engine's time spent at idle and minimize the engine's startup time at

stationary CI RICE.[1]	operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[2]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2]	

	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2	

11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2	
12. Non-emergency, non-black start landfill or digester gas-fired stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2	

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 51593, Aug. 20, 2010]

Table 2dto Subpart ZZZZ of Part 63— Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and	

	belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and	

	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 93 percent or more.	

9. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
10. Non-emergency, non-black start 4SRB stationary RICE >500 HP	a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O_2; or	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under

Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[75 FR 51595, Aug. 20, 2010]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE with a brake horsepower >500 located at major sources; new or reconstructed 4SLB stationary RICE with a brake horsepower ≥250 located at major sources; and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed 4SLB stationary RICE with a brake horsepower 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year that are not limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year and are limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE

is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 51596, Aug. 20, 2010]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O_2 at the inlet and outlet of the control device; and	(1) Portable CO and O_2 analyzer	(a) Using ASTM D6522–00 (2005)[a] (incorporated by reference, see §63.14). Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O_2 analyzer	(a) Using ASTM D6522–00 (2005)[ab] (incorporated by reference, see §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00m (2005)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.

		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c] provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c] provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005),[a]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03	(a) CO Concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.

[b]You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

[c]You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[75 FR 51597, Aug. 20, 2010]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if. . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500	a. Limit the concentration of CO, using oxidation catalyst, and using a	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation;

HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	CPMS	and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your

source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year		CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary	a. Reduce	i. The average reduction of

RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	formaldehyde emissions and not using NSCR	emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of formaldehyde and not using NSCR	i. The average formaldehyde concentration determined from the initial performance test is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
11. New or reconstructed non-emergency stationary RICE >500 HP	a. Limit the concentration of	i. The average formaldehyde concentration, corrected to 15

located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO or formaldehyde emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
13. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.

[76 FR 12867, Mar. 9, 2011]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a]and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and

of HAP		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a]and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary	a. Reduce formaldehyde	i. Collecting the catalyst inlet

RICE >500 HP located at a major source of HAP	emissions and using NSCR	temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;[a]and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;[a]and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[76 FR 12870, Mar. 9, 2011]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP and operated more than 24 hours per calendar year; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4)	i. Semiannually according to the requirements in §63.6650(b)(1)–(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)–(9) for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in §63.6650(b). i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must	i. Annually, according to the requirements in §63.6650.

equivalent to 10 percent or more of the gross heat input on an annual basis		demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.

[75 FR 51603, Aug. 20, 2010]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)–(2)	Compliance dates for existing	Yes.	

	sources		
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests	Yes	Subpart ZZZZ specifies test

	and reduction of data		methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.

		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.

§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)–(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting	Yes.	

	requirements		
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i)(C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

SECTION TT 40 CFR Part 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

§ 60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Reduce nitrogen oxides (NO_X) emissions by 90 percent or more, or limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)).

(2) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce NO_Xemissions by 90 percent or more, or limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and §60.4202(c) using the certification procedures required in 40 CFR part 94 subpart C, and must test their engines as specified in 40 CFR part 94.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 40 CFR 1039.125, 40 CFR 1039.130, 40 CFR 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89 or 40 CFR part 94 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40

CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under parts 89, 94, or 1039 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and $NO_X$and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit $NO_X$and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (d) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i= concentration of NO_Xor PM at the control device inlet,

C_o= concentration of NO_Xor PM at the control device outlet, and

R = percent reduction of NO_Xor PM emissions.

(2) You must normalize the NO_Xor PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \% O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj}= Calculated NO_Xor PM concentration adjusted to 15 percent O_2.

C_d= Measured concentration of NO_Xor PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

$\%O_2$= Measured O_2concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent $O_2$and CO_2concentration is measured in lieu of O_2concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 − 15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_d= Measured NO_Xconcentration in ppm.

$1.912x10^{-3}$= Conversion constant for ppm $NO_X$to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 8)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj}= Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §60.4205. Non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder, must meet the applicable emission standards in §60.4204(c).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI engines located in areas of Alaska not accessible by the Federal Aid Highway System should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) The Governor of Alaska may submit for EPA approval, by no later than January 11, 2008, an alternative plan for implementing the requirements of 40 CFR part 60, subpart IIII, for public-sector electrical utilities located in rural areas of Alaska not accessible by the Federal Aid Highway System. This alternative plan must be based on the requirements of section 111 of the Clean Air Act including any increased risks to human health and the environment and must also be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of 40 CFR part 60, subpart IIII. If EPA approves by rulemaking process an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel engines used in new stationary internal combustion engines subject to this paragraph.

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means either:

(1) The calendar year in which the engine was originally produced, or

(2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

(175≤HP<300)					
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X+ NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

[As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM

KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1]For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2]For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3]In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013

56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1]Engine speed: ±2 percent of point.

[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder	a. Reduce NO_X emissions by 90 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40	(c) Measurements to determine moisture content must be made at the same time as the

		control device; and,	CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	measurements for NO_X concentration.
		iv. Measure NO_X at the inlet and outlet of the control device	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

			ASTM D 6348–03 (incorporated by reference, see §60.17)	
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture	(3) Method 4 of 40 CFR part 60,	(c) Measurements to determine moisture

		content of the stationary internal combustion engine exhaust at the sampling port location; and	appendix A	content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary

			CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Browse Previous | Browse Next

SECTION UU 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Source: 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

What This Subpart Covers

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that commence modification or reconstruction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(f) Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

Emission Standards for Manufacturers

§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine replacement is . . .	and manufacturing dates are . . .	the engine must meet emission standards and related requirements for nonhandheld engines under . . .
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the

applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP, must certify those engines to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59175, Oct. 8, 2008]

§ 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in §60.4231 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (a) of this section.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that use gasoline engines, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (b) of this section.

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (c) of this section.

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_X) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_Xemission standard of 250 ppmvd at 15 percent oxygen (O_2), a CO emission standard 540 ppmvd at 15 percent O_2(675 ppmvd at 15 percent $O_2$for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O_2, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP;

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts

possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

Other Requirements for Owners and Operators

§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

(e) The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Manufacturers

§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in §60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI

internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D–1 cycle of International Organization of Standardization 8178–4: 1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 5 to 40 CFR 1048.505, except that Table 5 of 40 CFR 1048.505 applies to high load engines only. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipeline-quality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing that the engine will meet the emission standards specified in §60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipeline-quality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in §60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59176, Oct. 8, 2008]

§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in §60.4241 are subject only to the provisions indicated in §60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs §60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

(c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words “and stationary” after the word “nonroad” to the label.

(d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 90.1103 or 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

(1) The engines must be equipped with non-resettable hour meters.

(2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.

(3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Compliance Requirements for Owners and Operators

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

(d) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

Testing Requirements for Owners and Operators

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine

solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:

ER = Emission rate of NO_X in g/HP-hr.

C_d = Measured NO_X concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 2)}$$

Where:

ER = Emission rate of CO in g/HP-hr.

Cd= Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 3)}$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd= VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:

RFi= Response factor of compound i when measured with EPA Method 25A.

C_Mi= Measured concentration of compound i in ppmv as carbon.

C_Ai= True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \qquad \text{(Eq. 5)}$$

Where:

Ci_{corr}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

Ci_{meas}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \qquad \text{(Eq. 6)}$$

Where:

CPeq= Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

General Provisions

§ 60.4246 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Mobile Source Provisions

§ 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Manufacturers certifying to emission standards in 40 CFR part 90, including manufacturers certifying emergency engines below 130 HP, must meet the provisions of 40 CFR part 90. Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Definitions

§ 60.4248 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and carbon dioxide (CO2).

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary SI ICE used for peak shaving are not considered emergency stationary ICE. Stationary ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Manufacturer has the meaning given in section 216(1) of the Clean Air Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1048.801.

Model year means either: The calendar year in which the engine was originally produced, or the annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year, and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Pipeline-quality natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to June 12, 2006, with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to either: a gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that test stationary ICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Subpart means 40 CFR part 60, subpart JJJJ.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

Volatile organic compounds means volatile organic compounds as defined in 40 CFR 51.100(s).

Voluntary certification program means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in §60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Table 1 to Subpart JJJJ of Part 60—NO_X, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[d]	NO_X	CO	VOC[d]
Non-Emergency SI Natural Gas[b] and Non-Emergency SI Lean Burn LPG[b]	100≤HP<500	7/1/2008 1/1/2011	2.0 1.0	4.0 2.0	1.0 0.7	160 82	540 270	86 60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≥HP<1,350	1/1/2008 7/1/2010	2.0 1.0	4.0 2.0	1.0 0.7	160 82	540 270	86 60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500=≥HP<1,350)	HP≥500 HP≥500	7/1/2007 7/1/2010	2.0 1.0	4.0 2.0	1.0 0.7	160 82	540 270	86 60
Landfill/Digester Gas (except lean burn 500≥HP<1,350)	HP<500	7/1/2008 1/1/2011	3.0 2.0	5.0 5.0	1.0 1.0	220 150	610 610	80 80
	HP≥500	7/1/2007 7/1/2010	3.0 2.0	5.0 5.0	1.0 1.0	220 150	610 610	80 80
Landfill/Digester Gas Lean	500≥HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80

Burn		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25>HP<130 HP≥130	1/1/2009	[c]10 2.0	387 4.0	N/A 1.0	N/A 160	N/A 540	N/A 86

[a]Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O2.

[b]Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2A do not have to comply with the CO emission standards of Table 1 of this subpart.

[c]The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_X+HC.

[d]For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

[As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO_Xin the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b]of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for NO_Xconcentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture	(4) Method 4 of 40 CFR part 60,	(c) Measurements to determine moisture	

	content of the stationary internal combustion engine exhaust at the sampling port location; and	appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	must be made at the same time as the measurement for NO_X concentration.	
	v. Measure NO_X at the exhaust of the stationary internal combustion engine.	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522–00(2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3Bb of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for CO concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.	

	location; and	reference, see §60.17).		
	v. Measure CO at the exhaust of the stationary internal combustion engine.	(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00(2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b]of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005)[a].	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for VOC concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.	
	v. Measure VOC at the exhaust of the stationary internal	(5) Methods 25A and 18 of 40 CFR part 60, appendix A,	(d) Results of this test consist of the average of the three 1-hour or	

	combustion engine.	Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A,[cd] Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	longer runs.	

[a]ASTM D6522–00 is incorporated by reference; see 40 CFR 60.17. Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

[b]You may use ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses, for measuring the O_2 content of the exhaust gas as an alternative to EPA Method 3B.

[c]You may use EPA Method 18 of 40 CFR part 60, appendix A, provided that you conduct an adequate presurvey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (*http://www.epa.gov/ttn/emc/prelim/otm11.pdf*).

[d]You may use ASTM D6420–99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic.

Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.

§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for Manufacturers Participating in the Voluntary Certification Program and Certifying Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	

1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	
1048.240(b)(c)(d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader back to the specific emissions regulation for guidance)	Yes	
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

Attachment C: 40 CFR 63, Subpart DDDDD
National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Title 40: Protection of Environment
PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Contents

WHAT THIS SUBPART COVERS

§ 63.7480 WHAT IS THE PURPOSE OF THIS SUBPART?

§ 63.7485 AM I SUBJECT TO THIS SUBPART?

§ 63.7490 WHAT IS THE AFFECTED SOURCE OF THIS SUBPART?

§ 63.7491 ARE ANY BOILERS OR PROCESS HEATERS NOT SUBJECT TO THIS SUBPART?

§ 63.7495 WHEN DO I HAVE TO COMPLY WITH THIS SUBPART?

EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

§ 63.7499 WHAT ARE THE SUBCATEGORIES OF BOILERS AND PROCESS HEATERS?

§ 63.7500 WHAT EMISSION LIMITATIONS, WORK PRACTICE STANDARDS, AND OPERATING LIMITS MUST I MEET?

§ 63.7501 AFFIRMATIVE DEFENSE FOR VIOLATION OF EMISSION STANDARDS DURING MALFUNCTION.

GENERAL COMPLIANCE REQUIREMENTS

§ 63.7505 WHAT ARE MY GENERAL REQUIREMENTS FOR COMPLYING WITH THIS SUBPART?

TESTING, FUEL ANALYSES, AND INITIAL COMPLIANCE REQUIREMENTS

§ 63.7510 WHAT ARE MY INITIAL COMPLIANCE REQUIREMENTS AND BY WHAT DATE MUST I CONDUCT THEM?

§ 63.7515 WHEN MUST I CONDUCT SUBSEQUENT PERFORMANCE TESTS, FUEL ANALYSES, OR TUNE-UPS?

§ 63.7520 WHAT STACK TESTS AND PROCEDURES MUST I USE?

§ 63.7521 WHAT FUEL ANALYSES, FUEL SPECIFICATION, AND PROCEDURES MUST I USE?

§ 63.7522 CAN I USE EMISSIONS AVERAGING TO COMPLY WITH THIS SUBPART?

§ 63.7525 WHAT ARE MY MONITORING, INSTALLATION, OPERATION, AND MAINTENANCE REQUIREMENTS?

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

§ 63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

CONTINUOUS COMPLIANCE REQUIREMENTS

§ 63.7535 Is there a minimum amount of monitoring data I must obtain?

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

§ 63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

NOTIFICATION, REPORTS, AND RECORDS

§ 63.7545 What notifications must I submit and when?

§ 63.7550 What reports must I submit and when?

§ 63.7555 What records must I keep?

§ 63.7560 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

§ 63.7565 What parts of the General Provisions apply to me?

§ 63.7570 Who implements and enforces this subpart?

§ 63.7575 What definitions apply to this subpart?

Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters

Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters

Table 3 to Subpart DDDDD of Part 63—Work Practice Standards

Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters

Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements

Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements

Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits

Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance

Table 9 to Subpart DDDDD of Part 63—Reporting Requirements

TABLE 10 TO SUBPART DDDDD OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD

TABLE 11 TO SUBPART DDDDD OF PART 63—TOXIC EQUIVALENCY FACTORS FOR DIOXINS/FURANS

TABLE 12 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER JUNE 4, 2010, AND BEFORE MAY 20, 2011

TABLE 13 TO SUBPART DDDDD OF PART 63—ALTERNATIVE EMISSION LIMITS FOR NEW OR RECONSTRUCTED BOILERS AND PROCESS HEATERS THAT COMMENCED CONSTRUCTION OR RECONSTRUCTION AFTER DECEMBER 23, 2011, AND BEFORE JANUARY 31, 2013

SOURCE: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

What This Subpart Covers

§ 63.7480 What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

§ 63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in § 63.7575 that is located at, or is part of, a major source of HAP, except as specified in § 63.7491. For purposes of this subpart, a major source of HAP is as defined in § 63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in § 63.7575.

[78 FR 7162, Jan. 31, 2013]

§ 63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in § 63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in § 63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in § 63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

§ 63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see § 63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in § 63.1200(b) is not covered by Subpart EEE.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7491 was amended by revising paragraph (n). However, there is no paragraph (n) to revise.

§ 63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by January 31, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in § 63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in § 63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart on the effective date of the switch from waste to fuel.

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for a exemption in § 63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

EDITORIAL NOTE: At 78 FR 7162, Jan. 31, 2013, § 63.7495 was amended by adding paragraph (e). However, there is already a paragraph (e).

Emission Limitations and Work Practice Standards

§ 63.7499 What are the subcategories of boilers and process heaters?

The subcategories of boilers and process heaters, as defined in § 63.7575 are:

(a) Pulverized coal/solid fossil fuel units.

(b) Stokers designed to burn coal/solid fossil fuel.

(c) Fluidized bed units designed to burn coal/solid fossil fuel.

(d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.

(e) Fluidized bed units designed to burn biomass/bio-based solid.

(f) Suspension burners designed to burn biomass/bio-based solid.

(g) Fuel cells designed to burn biomass/bio-based solid.

(h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.

(j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(k) Units designed to burn liquid fuel that are non-continental units.

(l) Units designed to burn gas 1 fuels.

(m) Units designed to burn gas 2 (other) gases.

(n) Metal process furnaces.

(o) Limited-use boilers and process heaters.

(p) Units designed to burn solid fuel.

(q) Units designed to burn liquid fuel.

(r) Units designed to burn coal/solid fossil fuel.

(s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.

(t) Units designed to burn heavy liquid fuel.

(u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under § 63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate steam. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate

electricity. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (a)(1)(iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010 and before May 20, 2011, you may comply with the emission limits in Table 1 or 11 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction after December 23, 2011 and before January 31, 2013, you may comply with the emission limits in Table 1 or 13 to this subpart until January 31, 2016.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under § 63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in § 63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in § 63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

§ 63.7501 Affirmative Defense for Violation of Emission Standards During Malfunction.

In response to an action to enforce the standards set forth in § 63.7500 you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) *Assertion of affirmative defense.* To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The violation:

(i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

(ii) Could not have been prevented through careful planning, proper design, or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when a violation occurred; and

(3) The frequency, amount, and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

(b) *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in § 63.7500 of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[78 FR 7163, Jan. 31, 2013]

General Compliance Requirements

§ 63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These limits apply to you at all times the affected unit is operating except for the periods noted in § 63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS), continuous parameter monitoring system (CPMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to § 63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits (including the use of CPMS), or with a CEMS, or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in § 63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of § 63.7525. Using the process described in § 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013]

Testing, Fuel Analyses, and Initial Compliance Requirements

§ 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to § 63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under § 63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those fuels according to § 63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to § 63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to § 63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart and establish operating limits according to § 63.7530 and Table 8 to this subpart. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to § 63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 12, or 11 through 13 to this subpart, as specified in § 63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with § 63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section.

(f) For new or reconstructed affected sources (as defined in § 63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013 or within 180 days after startup of the source, whichever is later. If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent (that is, higher) than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than July 29, 2016.

(g) For new or reconstructed affected sources (as defined in § 63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in § 63.7540(a) following the initial compliance date specified in § 63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in § 63.7540(a).

(h) For affected sources (as defined in § 63.7490) that ceased burning solid waste consistent with § 63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance

within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2013, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in § 63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in § 63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to this subpart, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in § 63.7495.

[78 FR 7164, Jan. 31, 2013]

§ 63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to § 63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under § 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after the initial startup of the new or reconstructed affected source.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to § 63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in § 63.7550.

(g) For affected sources (as defined in § 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) and the schedule described in § 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra low sulfur liquid fuel, you do not need to conduct further performance tests if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in § 63.7525(a)(3) of this subpart to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in § 63.7510(a).

[78 FR 7165, Jan. 31, 2013]

§ 63.7520 What stack tests and procedures must I use?

(a) You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in § 63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013]

§ 63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section and Table 6 to this subpart.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in § 63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than

60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing. For monthly sampling, each composite sample shall be collected at approximately equal 10-day intervals during the month.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in § 63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop and submit a site-specific fuel analysis plan for other gas 1 fuels to the EPA Administrator for review and approval according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than

60 days before the date that you intend to conduct the initial compliance demonstration described in § 63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(h) You must obtain a single fuel sample for each fuel type according to the sampling procedures listed in Table 6 for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013]

§ 63.7522 Can I use emissions averaging to comply with this subpart?

(a) As an alternative to meeting the requirements of § 63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to this subpart as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on January 31, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on January 31, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are operating following the compliance date specified in § 63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hm) \div \sum_{i=1}^{n} Hm \qquad \text{(Eq. 1a)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \qquad \text{(Eq. 1b)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \qquad \text{(Eq. 1c)}$$

Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM

(or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c). If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, Eadj, determined according to § 63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to this subpart that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sm \times Cfi) \div \sum_{i=1}^{n} (Sm \times Cfi) \quad \text{(Eq. 2)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in § 63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in § 63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual steam generation for the month if you are complying with the emission limits on a electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Hb) \div \sum_{i=1}^{n} Hb \quad \text{(Eq. 3a)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times So) \div \sum_{i=1}^{n} So \quad \text{(Eq. 3b)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to § 63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Eo) \div \sum_{i=1}^{n} Eo \quad \text{(Eq. 3c)}$$

Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to § 63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to § 63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in § 63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^{n} (Er \times Sa \times Cfi) \div \sum_{i=1}^{n} (Sa \times Cfi) \quad \text{(Eq. 4)}$$

Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$Eavg = \sum_{i=1}^{n} ERi \div 12 \quad \text{(Eq. 5)}$$

Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month “i” (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) You must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with § 63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) The Administrator shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategories, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in

other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in § 63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$En = \sum_{i=1}^{n}(ELi \times Hi) \div \sum_{i=1}^{n} Hi \qquad \text{(Eq. 6)}$$

Where:

En = HAP emission limit, pounds per million British thermal units (lb/MMBtu), parts per million (ppm), or nanograms per dry standard cubic meter (ng/dscm).

ELi = Appropriate emission limit from Table 2 to this subpart for unit i, in units of lb/MMBtu, ppm or ng/dscm.

Hi = Heat input from unit i, MMBtu.

(2) Conduct performance tests according to procedures specified in § 63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in § 63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013]

§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in § 63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen according to the procedures in paragraphs (a)(1) through (7) of this section.

(1) Install the CO CEMS and oxygen analyzer by the compliance date specified in § 63.7495. The CO and oxygen levels shall be monitored at the same location at the outlet of the boiler or process heater.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, the site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to § 63.7505(d), and the requirements in § 63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in § 63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must be collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with § 63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Complete a minimum of one cycle of CO and oxygen CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen data concurrently. Collect at least four CO and oxygen CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in § 63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, certify, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must be capable of detecting and responding to PM concentrations of no greater than 0.5 milligram per actual cubic meter.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with § 63.7505(d), the requirements in § 63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of § 60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see *http://www.epa.gov/ttn/chief/ert/erttool.html/*).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in § 63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in § 63.7535(b), and comply with the data calculation requirements specified in § 63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in § 63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in § 63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (*e.g.* , PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (*e.g.* , check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in you monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see § 63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in § 63.7540(a)(14) for a mercury CEMS and § 63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO_2) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you use an SO_2 CEMS, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to part 75 of this chapter.

(1) The SO_2 CEMS must be installed by the compliance date specified in § 63.7495.

(2) For on-going quality assurance (QA), the SO_2 CEMS must meet the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO_2 CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO_2 data, you must operate the SO_2 CEMS as specified in § 63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in § 63.7535(c). Periods when SO_2 data are unavailable may constitute monitoring deviations as specified in § 63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO_2 concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO_2 data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013]

§ 63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to § 63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as

specified by § 63.7510(a)(2)(i). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to § 63.7525.

(b) If you demonstrate compliance through performance testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in § 63.7510(a)(2). (Note that § 63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (Clinput) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (Ci).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$Clinput = \sum_{i=1}^{n} (Ci \times Qi) \quad \text{(Eq. 7)}$$

Where:

Clinput = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

Ci = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Qi) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HGi).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$Mercuryinput = \sum_{i=1}^{n} (HGi \times Qi) \quad \text{(Eq. 8)}$$

Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HGi = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Qi) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSMi).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$TSMinput = \sum_{i=1}^{n} (TSMi \times Qi) \quad \text{(Eq. 9)}$$

Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSMi = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of TSM. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in § 63.7575, as your operating limits during the performance test during which you

demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(*1*) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(*2*) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(*3*) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(*1*) through (*4*) of this section.

(*1*) Determine your instrument zero output with one of the following procedures:

(*i*) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*ii*) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(*iii*) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(*iv*) If none of the steps in paragraphs (b)(4)(ii)(B)(*1*)(*i*) through (*iii*) of this section are possible, you must use a zero output value provided by the manufacturer.

(*2*) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{X} = \frac{1}{n}\sum_{i=1}^{n} X_1, \bar{Y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 10)}$$

Where:

X_1 = the PM CPMS data points for the three runs constituting the performance test,

Y_1 = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(*3*) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 11)}$$

Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

Y_1 = the three run average lb/MMBtu PM concentration,

X_1 = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(*4*) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_l = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 12)}$$

Where:

O_l = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 13)}$$

Where:

X_1 = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30-\text{day} = \frac{\sum_{i=1}^{n} Hpv}{n} \qquad \text{(Eq. 14)}$$

Where:

30-day = 30-day average.

Hpvi = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 720 operating hours.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11 through 13 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers (“back half”) of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the “back half” for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run. (iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in § 63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iii) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(iv) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(v) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(vii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(viii) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO_2 CEMS is to install and operate the SO_2 according to the requirements in § 63.7525(m) establish a maximum SO_2 emission rate equal to the highest hourly average SO_2 measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to § 63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = mean + (SD \times t) \quad \text{(Eq. 15)}$$

Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0.1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n} \left(Ci90 \times Qi \times 1.028\right) \qquad \text{(Eq. 16)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n} \left(Hgi90 \times Qi\right) \qquad \text{(Eq. 17)}$$

Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$Metals = \sum_{i=1}^{n} \left(TSM90i \times Qi\right) \qquad \text{(Eq. 18)}$$

Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 11 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of “1” for Qi.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d) If you own or operate an existing unit with a heat input capacity of less than 10 million Btu per hour or a unit in the unit designed to burn gas 1 subcategory, you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the unit.

(e) You must include with the Notification of Compliance Status a signed certification that the energy assessment was completed according to Table 3 to this subpart and is an accurate depiction of your facility at the time of the assessment.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in § 63.7575, you must conduct an initial fuel specification analyses according to § 63.7521(f) through (i) and according to the frequency listed in § 63.7540(c) and maintain records of the results of the testing as outlined in § 63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart, you must meet the work practice standard according to Table 3 of this subpart. During startup and shutdown, you must only follow the work practice standards according to item 5 of Table 3 of this subpart.

(i) If you opt to comply with the alternative SO_2 CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and SO_2 CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with § 63.7500(a)(3); and

(3) You establish a unit-specific maximum SO_2 operating limit by collecting the minimum hourly SO_2 emission rate on the SO_2 CEMS during the paired 3-run test for HCl. The maximum SO_2 operating limit is equal to the highest hourly average SO_2 concentration measured during the most recent HCl performance test.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013]

§ 63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance

approach for an existing affected boiler for demonstrating initial compliance according to § 63.7522(e) and for demonstrating monthly compliance according to § 63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at: *http://www.epa.gov/ttn/atw/boiler/boilerpg.html* .

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (*i.e.,* fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left(\sum_{i=1}^{n} EIS_{iactual} \right) \div EI_{baseline} \quad \text{(Eq. 19)}$$

Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to this subpart at all times the affected unit is operating, following the compliance date specified in § 63.7495.

(f) You must use Equation 20 of this section to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 to this subpart.

$$E_{adj} = E_m \times (1 - ECredits) \quad \text{(Eq. 20)}$$

Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under § 63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 21, 2013]

Continuous Compliance Requirements

§ 63.7535 Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see § 63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013]

§ 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in § 63.7550(c), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 12 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 12 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of § 63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of § 63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in § 63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 13 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 13 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of § 63.7530. If the results of recalculating the maximum mercury input using Equation 8 of § 63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§ 63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is operating.

(iii) Keep records of CO levels according to § 63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in § 63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. This frequency does not apply to limited-use boilers and process heaters, as defined in § 63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in § 63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be the maximum of 30 unit operating days or 720 hours. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of § 63.7530. If the results of recalculating the maximum TSM input using Equation 9 of § 63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(b). You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 14 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in § 63.7510(a)(2)(i) through (iii). You may exclude the fuels described in § 63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 14 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new boiler or process heater operating hour.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (i) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in § 63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in § 63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in § 63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in § 63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in § 63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in § 63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to item 5 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013]

§ 63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in § 63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

Notification, Reports, and Records

§ 63.7545 What notifications must I submit and when?

(a) You must submit to the Administrator all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in § 63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8), as applicable. If you are not required to conduct an initial compliance demonstration as specified in § 63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under § 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of § 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in § 63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility complies with the required initial tune-up according to the procedures in § 63.7540(a)(10)(i) through (vi).”

(ii) “This facility has had an energy assessment performed according to § 63.7530(e).”

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: “No secondary materials that are solid waste were combusted in any affected unit.”

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013]

§ 63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in § 63.7495 and ending on July 31 or January 31, whichever date is the first date that occurs at least 180 days (or 1, 2, or 5 years, as applicable, if submitting an annual, biennial, or 5-year compliance report) after the compliance date that is specified for your source in § 63.7495.

(2) The first compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in § 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to a the requirements of a tune up they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv) and (xiv) of this section.

(2) If a facility is complying with the fuel analysis they must submit a compliance report with the information in paragraphs (c)(5)(i) through (iv), (vi), (x), (xi), (xiii), (xv) and paragraph (d) of this section.

(3) If a facility is complying with the applicable emissions limit with performance testing they must submit a compliance report with the information in (c)(5)(i) through (iv), (vi), (vii), (ix), (xi), (xiii), (xv) and paragraph (d) of this section.

(4) If a facility is complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (vi), (xi), (xiii), (xv) through (xvii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with § 63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 12 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 13 of § 63.7530 that

demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 14 of § 63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of § 63.7530 or the maximum mercury input operating limit using Equation 8 of § 63.7530, or the maximum TSM input operating limit using Equation 9 of § 63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§ 63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§ 63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in § 63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with § 63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values based on the daily CEMS (CO and mercury) and CPMS (PM CPMS output, scrubber pH, scrubber liquid flow rate, scrubber pressure drop) data.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or

operating limit, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit or operating limit from which you deviated.

(2) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in § 63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (defined in § 63.2) as required by this subpart you must submit the results of the performance tests, including any associated fuel analyses, required by this subpart and the compliance reports required in § 63.7550(b) to the EPA's

WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the Administrator, you must also submit these reports, including the confidential business information, to the Administrator in the format specified by the Administrator. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test in paper submissions to the Administrator.

(2) Within 60 days after the date of completing each CEMS performance evaluation test (defined in 63.2) you must submit the relative accuracy test audit (RATA) data to the EPA's Central Data Exchange by using CEDRI as mentioned in paragraph (h)(1) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, the owner or operator shall submit the results of the performance evaluation in paper submissions to the Administrator.

(3) You must submit all reports required by Table 9 of this subpart electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report you must submit the report to the Administrator at the appropriate address listed in § 63.13. At the discretion of the Administrator, you must also submit these reports, to the Administrator in the format specified by the Administrator.

[78 FR 7183, Jan. 31, 2013]

§ 63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in § 63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to § 241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under § 241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to § 241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in § 241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under § 241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per § 241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under § 241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) For units in the limited use subcategory, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler or process heater was operating.

(4) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 12 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(5) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 13 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(6) If, consistent with § 63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to this subpart, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(7) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(8) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in § 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(9) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 14 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(10) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(11) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(e) If you elect to average emissions consistent with § 63.7522, you must additionally keep a copy of the emission averaging implementation plan required in § 63.7522(g), all calculations required under § 63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with § 63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to § 63.7533, you must keep a copy of the Implementation Plan required in § 63.7533(d) and copies of all data and calculations used to establish credits according to § 63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by § 63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

(i) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(j) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013]

§ 63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years.

Other Requirements and Information

§ 63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g).

(2) Approval of alternative opacity emission limits in § 63.7500(a) under § 63.6(h)(9).

(3) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, and alternative analytical methods requested under § 63.7521(b)(2).

(4) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90, and approval of alternative operating parameters under § 63.7500(a)(2) and § 63.7522(g)(2).

(5) Approval of major change to recordkeeping and reporting under § 63.10(e) and as defined in § 63.90.

[76 FR 15664, Mar. 21, 2011 as amended at 78 FR 7186, Jan. 31, 2013]

§ 63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent.

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.,* baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see § 63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging

residues (slash), nut and grain hulls and chaff (*e.g.,* almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see § 63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation. (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see § 63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see § 60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be “capable of combusting” fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in

length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 33 percent of the energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (e.g., steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable average annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, vegetable oil, and comparable fuels as defined under 40 CFR 261.38.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

Major source for oil and natural gas production facilities, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see § 63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3 H_8$.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum concentration of 40 micrograms/cubic meters of mercury.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, *see* § 63.14(b)).

Responsible official means responsible official as defined in § 70.2.

Secondary material means the material as defined in § 241.2 of this chapter.

Shutdown means the cessation of operation of a boiler or process heater for any purpose. Shutdown begins either when none of the steam from the boiler is supplied for heating and/or producing electricity, or for any other purpose, or at the point of no fuel being fired in the boiler or process heater, whichever is earlier. Shutdown ends when there is no steam and no heat being supplied and no fuel being fired in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying steam or heat for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam or heat from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be calculated using Equations 21 through 25 of this section, as appropriate:

(i) For emission limits for boilers in the unit designed to burn solid fuel subcategory use Equation 21 of this section:

$$EL_{OBE} = EL_T \times 12.7 \text{ MMBtu/Mwh} \quad \text{(Eq. 21)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(ii) For PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal use Equation 22 of this section:

$$EL_{OBE} = EL_T \times 12.2 \text{ MMBtu/Mwh} \quad \text{(Eq. 22)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iii) For PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass use Equation 23 of this section:

$$EL_{OBE} = EL_T \times 13.9 \text{ MMBtu/Mwh} \quad \text{(Eq. 23)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(iv) For emission limits for boilers in one of the subcategories of units designed to burn liquid fuels use Equation 24 of this section:

$$EL_{OBE} = EL_T \times 13.8 \text{ MMBtu/Mwh} \quad \text{(Eq. 24)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

(v) For emission limits for boilers in the unit designed to burn gas 2 (other) subcategory, use Equation 25 of this section:

$$EL_{OBE} = EL_T \times 10.4 \text{ MMBtu/Mwh} \quad \text{(Eq. 25)}$$

Where:

EL_{OBE} = Emission limit in units of pounds per megawatt-hour.

EL_T = Appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input.

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

Traditional fuel means the fuel as defined in § 241.2 of this chapter.

Tune-up means adjustments made to a boiler or process heater in accordance with the procedures outlined in § 63.7540(a)(10).

Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur.

Unit designed to burn biomass/bio-based solid subcategory includes any boiler or process heater that burns at least 10 percent biomass or bio-based solids on an annual heat input basis in combination with solid fossil fuels, liquid fuels, or gaseous fuels.

Unit designed to burn coal/solid fossil fuel subcategory includes any boiler or process heater that burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Unit designed to burn gas 2 (other) subcategory includes any boiler or process heater that is not in the unit designed to burn gas 1 subcategory and burns any gaseous fuels either alone or in combination with less than 10 percent coal/solid fossil fuel, and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, and no liquid fuels. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that are not in the unit designed to burn gas 1 subcategory and that burn liquid fuel during periods of gas curtailment or gas supply interruption of any duration are also included in this definition.

Unit designed to burn heavy liquid subcategory means a unit in the unit designed to burn liquid subcategory where at least 10 percent of the heat input from liquid fuels on an annual heat input basis comes from heavy liquids.

Unit designed to burn light liquid subcategory means a unit in the unit designed to burn liquid subcategory that is not part of the unit designed to burn heavy liquid subcategory.

Unit designed to burn liquid subcategory includes any boiler or process heater that burns any liquid fuel, but less than 10 percent coal/solid fossil fuel and less than 10 percent biomass/bio-based solid fuel on an annual heat input basis, either alone or in combination with gaseous fuels. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year are not included in this definition. Units in the unit design to burn gas 1 or unit designed to burn gas 2 (other) subcategories during periods of gas curtailment or gas supply interruption of any duration are also not included in this definition.

Unit designed to burn liquid fuel that is a non-continental unit means an industrial, commercial, or institutional boiler or process heater meeting the definition of the unit designed to burn liquid subcategory located in the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Unit designed to burn solid fuel subcategory means any boiler or process heater that burns only solid fuels or at least 10 percent solid fuel on an annual heat input basis in combination with liquid fuels or gaseous fuels.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards or VCS mean technical standards (*e.g.,* materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, *http://www.astm.org*), American Society of Mechanical Engineers (ASME ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, *http://www.asme.org*), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, +41 22 749 01 11, *http://www.iso.org/iso/home.htm*), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, + 61 2 9237 6171 *http://www.stadards.org.au*), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, +44 (0)20 8996 9001, *http://www.bsigroup.com*), Canadian Standards Association (CSA 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, *http://www.csa.ca*), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium +32 2 550 08 11, *http://www.cen.eu/cen*), and German Engineering Standards (VDI VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, +49 211 6214-230, *http://www.vdi.eu*). The types of standards that are not considered VCS are standards developed by: The United States, *e.g.,* California (CARB) and Texas (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. government, *e.g.,* Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an

industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Waste heat process heater means an enclosed device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat process heaters are also referred to as recuperative process heaters. This definition includes both fired and unfired waste heat process heaters.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

[78 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

Table 1 to Subpart DDDDD of Part 63—Emission Limits for New or Reconstructed Boilers and Process Heaters

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
1. Units in all subcategories designed to burn solid fuel.	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.28 lb per MWh	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.0E-07 [a]lb per MMBtu of heat input	8.7E-07 [a]lb per MMBtu of steam output or 1.1E-05 [a]lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
2. Units designed to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	1.1E-03 lb per MMBtu of steam output or 1.4E-02 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
			2.9E-04 lb per MWh)	
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.2E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (390 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	5.8E-01 lb per MMBtu of steam output or 6.8 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (2.7E-05 lb per MMBtu of steam output or 3.7E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.5E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (4.2E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	2.2E-01 lb per MMBtu of steam output or 2.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input)	1.2E-02 lb per MMBtu of steam output or 0.14 lb per MWh; or (1.1E-04 [a]lb per MMBtu of steam output or 1.2E-03 [a]lb per MWh)	Collect a minimum of 3 dscm per run.
10. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)		
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	3.1E-02 lb per MMBtu of steam output or 4.2E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	330 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	3.5E-01 lb per MMBtu of steam output or 3.6 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-03 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	4.3E-03 lb per MMBtu of steam output or 4.5E-02 lb per MWh; or (5.2E-05 lb per MMBtu of steam output or 5.5E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solids	a. CO	910 ppm by volume on a dry basis corrected to 3 percent oxygen	1.1 lb per MMBtu of steam output or 1.0E+01 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 [a]lb per MMBtu of heat input)	3.0E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (5.1E-05 lb per MMBtu of steam output or 4.1E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
13. Hybrid suspension grate	a. CO (or CEMS)	1,100 ppm by volume on a dry basis	1.4 lb per MMBtu of steam output or 12	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
boiler designed to burn biomass/bio-based solids		corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	lb per MWh; 3-run average	
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	3.3E-02 lb per MMBtu of steam output or 3.7E-01 lb per MWh; or (5.5E-04 lb per MMBtu of steam output or 6.2E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	4.4E-04 lb per MMBtu of heat input	4.8E-04 lb per MMBtu of steam output or 6.1E-03 lb per MWh	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.8E-07 [a]lb per MMBtu of heat input	5.3E-07 [a]lb per MMBtu of steam output or 6.7E-06 [a]lb per MWh	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-02 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	1.5E-02 lb per MMBtu of steam output or 1.8E-01 lb per MWh; or (8.2E-05 lb per MMBtu of steam output or 1.1E-03 lb per MWh)	Collect a minimum of 3 dscm per run.
16. Units designed to burn light liquid	a. CO	130 ppm by volume on a dry basis corrected to	0.13 lb per MMBtu of steam output or	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
fuel		3 percent oxygen	1.4 lb per MWh	
	b. Filterable PM (or TSM)	1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	1.2E-03 [a]lb per MMBtu of steam output or 1.6E-02 [a]lb per MWh; or (3.2E-05 lb per MMBtu of steam output or 4.0E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	2.5E-02 lb per MMBtu of steam output or 3.2E-01 lb per MWh; or (9.4E-04 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 4 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	Or the emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		heat input)	per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[c] If your affected source is a new or reconstructed affected source that commenced construction or reconstruction after June 4, 2010, and before January 31, 2013, you may comply with the emission limits in Tables 11, 12 or 13 to this subpart until January 31, 2016. On and after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

[78 FR 7193, Jan. 31, 2013]

Table 2 to Subpart DDDDD of Part 63—Emission Limits for Existing Boilers and Process Heaters

As stated in § 63.7500, you must comply with the following applicable emission limits:

[Units with heat input capacity of 10 million Btu per hour or greater]

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
1. Units in all subcategories designed to burn solid fuel	a. HCl	2.2E-02 lb per MMBtu of heat input	2.5E-02 lb per MMBtu of steam output or 0.27 lb per MWh	For M26A, Collect a minimum of 1 dscm per run; for M26, collect a minimum of 120 liters per run.
	b. Mercury	5.7E-06 lb per MMBtu of heat input	6.4E-06 lb per MMBtu of steam	For M29, collect a minimum of 3 dscm per

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
			output or 7.3E-05 lb per MWh	run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
2. Units design to burn coal/solid fossil fuel	a. Filterable PM (or TSM)	4.0E-02 lb per MMBtu of heat input; or (5.3E-05 lb per MMBtu of heat input)	4.2E-02 lb per MMBtu of steam output or 4.9E-01 lb per MWh; or (5.6E-05 lb per MMBtu of steam output or 6.5E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
3. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.11 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
4. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	160 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.14 lb per MMBtu of steam output or 1.7 lb per MWh; 3-run average	1 hr minimum sampling time.
5. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	0.12 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
6. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry	1.3E-01 lb per MMBtu of steam output or 1.5 lb per MWh; 3-run average	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
fossil fuel		basis corrected to 3 percent oxygen, 30-day rolling average)		
7. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1.4 lb per MMBtu of steam output or 17 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input)	4.3E-02 lb per MMBtu of steam output or 5.2E-01 lb per MWh; or (2.8E-04 lb per MMBtu of steam output or 3.4E-04 lb per MWh)	Collect a minimum of 2 dscm per run.
8. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	4.2E-01 lb per MMBtu of steam output or 5.1 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	3.7E-01 lb per MMBtu of steam output or 4.5 lb per MWh; or (4.6E-03 lb per MMBtu of steam output or 5.6E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
9. Fluidized bed units designed to burn biomass/bio-based solid	a. CO (or CEMS)	470 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	4.6E-01 lb per MMBtu of steam output or 5.2 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-01 lb per MMBtu of heat input; or (1.2E-03 lb per MMBtu of heat input)	1.4E-01 lb per MMBtu of steam output or 1.6 lb per MWh; or (1.5E-03 lb	Collect a minimum of 1 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
			per MMBtu of steam output or 1.7E-02 lb per MWh)	
10. Suspension burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1.9 lb per MMBtu of steam output or 27 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	5.2E-02 lb per MMBtu of steam output or 7.1E-01 lb per MWh; or (6.6E-03 lb per MMBtu of steam output or 9.1E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
11. Dutch Ovens/Pile burners designed to burn biomass/bio-based solid	a. CO (or CEMS)	770 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	8.4E-01 lb per MMBtu of steam output or 8.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-01 lb per MMBtu of heat input; or (2.0E-03 lb per MMBtu of heat input)	3.9E-01 lb per MMBtu of steam output or 3.9 lb per MWh; or (2.8E-03 lb per MMBtu of steam output or 2.8E-02 lb per MWh)	Collect a minimum of 1 dscm per run.
12. Fuel cell units designed to burn biomass/bio-based solid	a. CO	1,100 ppm by volume on a dry basis corrected to 3 percent oxygen	2.4 lb per MMBtu of steam output or 12 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (5.8E-03 lb per MMBtu of heat input)	5.5E-02 lb per MMBtu of steam output or 2.8E-01 lb per MWh; or (1.6E-02 lb per MMBtu of	Collect a minimum of 2 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
			steam output or 8.1E-02 lb per MWh)	
13. Hybrid suspension grate units designed to burn biomass/bio-based solid	a. CO (or CEMS)	2,800 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	2.8 lb per MMBtu of steam output or 31 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	4.4E-01 lb per MMBtu of heat input; or (4.5E-04 lb per MMBtu of heat input)	5.5E-01 lb per MMBtu of steam output or 6.2 lb per MWh; or (5.7E-04 lb per MMBtu of steam output or 6.3E-03 lb per MWh)	Collect a minimum of 1 dscm per run.
14. Units designed to burn liquid fuel	a. HCl	1.1E-03 lb per MMBtu of heat input	1.4E-03 lb per MMBtu of steam output or 1.6E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	2.0E-06 lb per MMBtu of heat input	2.5E-06 lb per MMBtu of steam output or 2.8E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B collect a minimum sample as specified in the method, for ASTM D6784 [b]collect a minimum of 2 dscm.
15. Units designed to burn heavy liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	6.2E-02 lb per MMBtu of heat input; or (2.0E-04 lb per MMBtu of heat input)	7.5E-02 lb per MMBtu of steam output or 8.6E-01 lb per MWh; or (2.5E-04 lb per MMBtu of steam output or 2.8E-03 lb per MWh)	Collect a minimum of 1 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during startup and shutdown . . .**	**The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
16. Units designed to burn light liquid fuel	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.13 lb per MMBtu of steam output or 1.4 lb per MWh	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	7.9E-03 lb per MMBtu of heat input; or (6.2E-05 lb per MMBtu of heat input)	9.6E-03 lb per MMBtu of steam output or 1.1E-01 lb per MWh; or (7.5E-05 lb per MMBtu of steam output or 8.6E-04 lb per MWh)	Collect a minimum of 3 dscm per run.
17. Units designed to burn liquid fuel that are non-continental units	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average based on stack test	0.13 lb per MMBtu of steam output or 1.4 lb per MWh; 3-run average	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.7E-01 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	3.3E-01 lb per MMBtu of steam output or 3.8 lb per MWh; or (1.1E-03 lb per MMBtu of steam output or 1.2E-02 lb per MWh)	Collect a minimum of 2 dscm per run.
18. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	0.16 lb per MMBtu of steam output or 1.0 lb per MWh	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	2.9E-03 lb per MMBtu of steam output or 1.8E-02 lb per MWh	For M26A, collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	1.4E-05 lb per MMBtu of steam output or 8.3E-05 lb per MWh	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 2 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input or (2.1E-04 lb per MMBtu of heat	1.2E-02 lb per MMBtu of steam output or 7.0E-02 lb	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during startup and shutdown . . .	The emissions must not exceed the following alternative output-based limits, except during startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
		input)	per MWh; or (3.5E-04 lb per MMBtu of steam output or 2.2E-03 lb per MWh)	

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to § 63.7515 if all of the other provisions of § 63.7515 are met. For all other pollutants that do not contain a footnote a, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7195, Jan. 31, 2013]

Table 3 to Subpart DDDDD of Part 63—Work Practice Standards

As stated in § 63.7500, you must comply with the following applicable work practice standards:

If your unit is . . .	You must meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.
3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or	Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will

If your unit is . . .	**You must meet the following . . .**
greater	conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in § 63.7575:
	a. A visual inspection of the boiler or process heater system.
	b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
	c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
	d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
	e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.
	f. A list of cost-effective energy conservation measures that are within the facility's control.
	g. A list of the energy savings potential of the energy conservation measures identified.
	h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
5. An existing or new boiler or process heater subject to emission limits in Table 1 or 2 or 11 through 13 to this subpart during startup	You must operate all CMS during startup. For startup of a boiler or process heater, you must use one or a combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked

If your unit is . . .	You must meet the following . . .
	rags, kerosene, hydrogen, paper, cardboard, refinery gas, and liquefied petroleum gas.
	If you start firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, selective non-catalytic reduction (SNCR), and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose.
	You must comply with all applicable emission limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of startup, as specified in § 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in § 63.7555.
6. An existing or new boiler or process heater subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart during shutdown	You must operate all CMS during shutdown. While firing coal/solid fossil fuel, biomass/bio-based solids, heavy liquid fuel, or gas 2 (other) gases during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, SNCR, and SCR.
	You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in § 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in § 63.7555.

[78 FR 7198, Jan. 31, 2013]

Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters

As stated in § 63.7500, you must comply with the applicable operating limits:

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
1. Wet PM scrubber	Maintain the 30-day rolling average pressure drop and the 30-day rolling

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
control on a boiler not using a PM CPMS	average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the most recent performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to this subpart.
2. Wet acid gas (HCl) scrubber control on a boiler not using a HCl CEMS	Maintain the 30-day rolling average effluent pH at or above the lowest one-hour average pH and the 30-day rolling average liquid flow rate at or above the lowest one-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with the HCl emission limitation according to § 63.7530(b) and Table 7 to this subpart.
3. Fabric filter control on units not using a PM CPMS	a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); or
	b. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.
4. Electrostatic precipitator control on units not using a PM CPMS	a. This option is for boilers and process heaters that operate dry control systems (i.e., an ESP without a wet scrubber). Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average); or
	b. This option is only for boilers and process heaters not subject to PM CPMS or continuous compliance with an opacity limit (i.e., COMS). Maintain the 30-day rolling average total secondary electric power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(b) and Table 7 to this subpart.
5. Dry scrubber or carbon injection control on a boiler not using a mercury CEMS	Maintain the minimum sorbent or carbon injection rate as defined in § 63.7575 of this subpart.
6. Any other add-on air pollution control type on units not using a PM CPMS	This option is for boilers and process heaters that operate dry control systems. Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (daily block average).
7. Fuel analysis	Maintain the fuel type or fuel mixture such that the applicable emission rates calculated according to § 63.7530(c)(1), (2) and/or (3) is less than the applicable emission limits.
8. Performance testing	For boilers and process heaters that demonstrate compliance with a performance test, maintain the operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test.
9. Oxygen analyzer system	For boilers and process heaters subject to a CO emission limit that demonstrate compliance with an O_2analyzer system as specified in § 63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the most

When complying with a Table 1, 2, 11, 12, or 13 numerical emission limit using . . .	You must meet these operating limits . . .
	recent CO performance test, as specified in Table 8. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a).
10. SO_2CEMS	For boilers or process heaters subject to an HCl emission limit that demonstrate compliance with an SO_2CEMS, maintain the 30-day rolling average SO_2emission rate at or below the highest hourly average SO_2concentration measured during the most recent HCl performance test, as specified in Table 8.

[78 FR 7199, Jan. 31, 2013]

Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements

As stated in § 63.7520, you must comply with the following requirements for performance testing for existing, new or reconstructed affected sources:

To conduct a performance test for the following pollutant...	You must...	Using...
1. Filterable PM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 to part 60 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 to part 60 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the PM emission concentration	Method 5 or 17 (positive pressure fabric filters must use Method 5D) at 40 CFR part 60, appendix A-3 or A-6 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
2. TSM	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.

To conduct a performance test for the following pollutant...	You must...	Using...
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the TSM emission concentration	Method 29 at 40 CFR part 60, appendix A-8 of this chapter
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
3. Hydrogen chloride	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-2 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the hydrogen chloride emission concentration	Method 26 or 26A (M26 or M26A) at 40 CFR part 60, appendix A-8 of this chapter.
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
4. Mercury	a. Select sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas	Method 2, 2F, or 2G at 40 CFR part 60, appendix A-1 or A-2 of this chapter.
	c. Determine oxygen or carbon dioxide concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-1 of this chapter, or ANSI/ASME PTC 19.10-1981.[a]
	d. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	e. Measure the mercury	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40

To conduct a performance test for the following pollutant...	You must...	Using...
	emission concentration	CFR part 60, appendix A-8 of this chapter or Method 101A at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784.[a]
	f. Convert emissions concentration to lb per MMBtu emission rates	Method 19 F-factor methodology at 40 CFR part 60, appendix A-7 of this chapter.
5. CO	a. Select the sampling ports location and the number of traverse points	Method 1 at 40 CFR part 60, appendix A-1 of this chapter.
	b. Determine oxygen concentration of the stack gas	Method 3A or 3B at 40 CFR part 60, appendix A-3 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981.[a]
	c. Measure the moisture content of the stack gas	Method 4 at 40 CFR part 60, appendix A-3 of this chapter.
	d. Measure the CO emission concentration	Method 10 at 40 CFR part 60, appendix A-4 of this chapter. Use a measurement span value of 2 times the concentration of the applicable emission limit.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7200, Jan. 31, 2013]

Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources. However, equivalent methods (as defined in § 63.7575) may be used in lieu of the prescribed methods at the discretion of the source owner or operator:

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
1. Mercury	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or EPA 1631 or EPA 1631E or ASTM D6323 [a](for solid), or EPA 821-R-01-013 (for liquid or solid), or ASTM D4177 [a](for liquid), or ASTM D4057 [a](for liquid), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a](for biomass), or EPA 3050 [a](for solid fuel), or EPA 821-R-01-013 [a](for liquid or solid), or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
		D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a], ASTM E871 [a], or ASTM D5864 [a], or ASTM D240, or ASTM D95 [a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	f. Measure mercury concentration in fuel sample	ASTM D6722 [a](for coal), EPA SW-846-7471B [a](for solid samples), or EPA SW-846-7470A [a](for liquid samples), or equivalent.
	g. Convert concentration into units of pounds of mercury per MMBtu of heat content	Equation 8 in § 63.7530.
	h. Calculate the mercury emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 12 in § 63.7530.
2. HCl	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M§[a](for coal), or ASTM D5198§[a](for biomass), or EPA 3050 [a]or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), ASTM D5864, ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a]or ASTM E871 [a], or D5864 [a], or ASTM D240 [a], or ASTM D95[a](for liquid fuels), or ASTM D4006 [a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels) or equivalent.
	f. Measure chlorine concentration in fuel sample	EPA SW-846-9250 [a], ASTM D6721 [a], ASTM D4208 [a](for coal), or EPA SW-846-5050 [a]or ASTM E776 [a](for solid fuel), or EPA SW-846-9056 [a]or SW-846-9076 [a](for solids or liquids) or equivalent.
	g. Convert concentrations into units of pounds of HCl per MMBtu of heat content	Equation 7 in § 63.7530.
	h. Calculate the HCl emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 11 in § 63.7530.

To conduct a fuel analysis for the following pollutant . . .	You must . . .	Using . . .
3. Mercury Fuel Specification for other gas 1 fuels	a. Measure mercury concentration in the fuel sample and convert to units of micrograms per cubic meter	Method 30B (M30B) at 40 CFR part 60, appendix A-8 of this chapter or ASTM D5954 [a], ASTM D6350 [a], ISO 6978-1:2003(E) [a], or ISO 6978-2:2003(E) [a], or EPA-1631 [a]or equivalent.
	b. Measure mercury concentration in the exhaust gas when firing only the other gas 1 fuel is fired in the boiler or process heater	Method 29, 30A, or 30B (M29, M30A, or M30B) at 40 CFR part 60, appendix A-8 of this chapter or Method 101A or Method 102 at 40 CFR part 61, appendix B of this chapter, or ASTM Method D6784 [a]or equivalent.
4. TSM for solid fuels	a. Collect fuel samples	Procedure in § 63.7521(c) or ASTM D5192 [a], or ASTM D7430 [a], or ASTM D6883 [a], or ASTM D2234/D2234M [a](for coal) or ASTM D6323 [a](for coal or biomass), or ASTM D4177 [a],(for liquid fuels)or ASTM D4057 [a](for liquid fuels),or equivalent.
	b. Composite fuel samples	Procedure in § 63.7521(d) or equivalent.
	c. Prepare composited fuel samples	EPA SW-846-3050B [a](for solid samples), EPA SW-846-3020A [a](for liquid samples), ASTM D2013/D2013M [a](for coal), ASTM D5198 [a]or TAPPI T266 [a](for biomass), or EPA 3050 [a]or equivalent.
	d. Determine heat content of the fuel type	ASTM D5865 [a](for coal) or ASTM E711 [a](for biomass), or ASTM D5864 [a]for liquids and other solids, or ASTM D240 [a]or equivalent.
	e. Determine moisture content of the fuel type	ASTM D3173 [a]or ASTM E871 [a], or D5864, or ASTM D240 [a], or ASTM D95 [a](for liquid fuels), or ASTM D4006[a](for liquid fuels), or ASTM D4177 [a](for liquid fuels) or ASTM D4057 [a](for liquid fuels), or equivalent.
	f. Measure TSM concentration in fuel sample	ASTM D3683 [a], or ASTM D4606 [a], or ASTM D6357 [a]or EPA 200.8 [a]or EPA SW-846-6020 [a], or EPA SW-846-6020A [a], or EPA SW-846-6010C [a], EPA 7060 [a]or EPA 7060A [a](for arsenic only), or EPA SW-846-7740 [a](for selenium only).
	g. Convert concentrations into units of pounds of TSM per MMBtu of heat content	Equation 9 in § 63.7530.
	h. Calculate the TSM emission rate from the boiler or process heater in units of pounds per million Btu	Equations 10 and 13 in § 63.7530.

[a] Incorporated by reference, see § 63.14.

[78 FR 7201, Jan. 31, 2013]

Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

If you have an applicable emission limit for . . .	**And your operating limits are based on . . .**	**You must . . .**	**Using . . .**	**According to the following requirements**
1. PM, TSM, or mercury	a. Wet scrubber operating parameters	i. Establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b)	(1) Data from the scrubber pressure drop and liquid flow rate monitors and the PM or mercury performance test	(a) You must collect scrubber pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the lowest hourly average scrubber pressure drop and liquid flow rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
	b. Electrostatic precipitator operating parameters (option only for units that operate wet scrubbers)	i. Establish a site-specific minimum total secondary electric power input according to § 63.7530(b)	(1) Data from the voltage and secondary amperage monitors during the PM or mercury performance test	(a) You must collect secondary voltage and secondary amperage for each ESP cell and calculate total secondary electric power input data every 15 minutes during the entire period of the performance tests.
				(b) Determine the average total secondary electric power input by computing the hourly averages using all of the 15-minute readings taken during each performance test.
2. HCl	a. Wet scrubber operating parameters	i. Establish site-specific minimum pressure drop, effluent pH, and flow rate operating limits according to § 63.7530(b)	(1) Data from the pressure drop, pH, and liquid flow-rate monitors and the HCl performance test	(a) You must collect pH and liquid flow-rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average pH and liquid flow rate by computing the hourly averages using all of the 15-

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
				minute readings taken during each performance test.
	b. Dry scrubber operating parameters	i. Establish a site-specific minimum sorbent injection rate operating limit according to § 63.7530(b). If different acid gas sorbents are used during the HCl performance test, the average value for each sorbent becomes the site-specific operating limit for that sorbent	(1) Data from the sorbent injection rate monitors and HCl or mercury performance test	(a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average sorbent injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average of the three test run averages established during the performance test as your operating limit. When your unit operates at lower loads, multiply your sorbent injection rate by the load fraction (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate.
	c. Alternative Maximum SO_2 emission rate	i. Establish a site-specific maximum SO_2 emission rate operating limit according to § 63.7530(b)	(1) Data from SO_2 CEMS and the HCl performance test	(a) You must collect the SO_2 emissions data according to § 63.7525(m) during the most recent HCl performance tests.
				(b) The maximum SO_2 emission rate is equal to the lowest hourly average SO_2 emission rate measured during the most recent HCl performance tests.

If you have an applicable emission limit for . . .	**And your operating limits are based on . . .**	**You must . . .**	**Using . . .**	**According to the following requirements**
3. Mercury	a. Activated carbon injection	i. Establish a site-specific minimum activated carbon injection rate operating limit according to § 63.7530(b)	(1) Data from the activated carbon rate monitors and mercury performance test	(a) You must collect activated carbon injection rate data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average activated carbon injection rate by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average established during the performance test as your operating limit. When your unit operates at lower loads, multiply your activated carbon injection rate by the load fraction (e.g., actual heat input divided by heat input during performance test, for 50 percent load, multiply the injection rate operating limit by 0.5) to determine the required injection rate.
4. Carbon monoxide	a. Oxygen	i. Establish a unit-specific limit for minimum oxygen level according to § 63.7520	(1) Data from the oxygen analyzer system specified in § 63.7525(a)	(a) You must collect oxygen data every 15 minutes during the entire period of the performance tests.
				(b) Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the lowest hourly average established during the performance test as your minimum operating limit.
5. Any pollutant for which compliance is	a. Boiler or process heater operating load	i. Establish a unit specific limit for maximum operating	(1) Data from the operating load monitors or from	(a) You must collect operating load or steam generation data every 15

If you have an applicable emission limit for . . .	And your operating limits are based on . . .	You must . . .	Using . . .	According to the following requirements
demonstrated by a performance test		load according to § 63.7520(c)	steam generation monitors	minutes during the entire period of the performance test.
				(b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test.
				(c) Determine the average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7203, Jan. 31, 2013]

Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance

As stated in § 63.7540, you must show continuous compliance with the emission limitations for each boiler or process heater according to the following:

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
1. Opacity	a. Collecting the opacity monitoring system data according to § 63.7525(c) and § 63.7535; and
	b. Reducing the opacity monitoring data to 6-minute averages; and
	c. Maintaining opacity to less than or equal to 10 percent (daily block average).
2. PM CPMS	a. Collecting the PM CPMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to § 63.7530(b)(4).
3. Fabric Filter Bag Leak Detection Operation	Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(9) are met.
4. Wet Scrubber Pressure Drop and Liquid Flow-rate	a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.7525 and 63.7535; and

If you must meet the following operating limits or work practice standards . . .	**You must demonstrate continuous compliance by . . .**
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to § 63.7530(b).
5. Wet Scrubber pH	a. Collecting the pH monitoring system data according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average pH at or above the operating limit established during the performance test according to § 63.7530(b).
6. Dry Scrubber Sorbent or Carbon Injection Rate	a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in § 63.7575.
7. Electrostatic Precipitator Total Secondary Electric Power Input	a. Collecting the total secondary electric power input monitoring system data for the electrostatic precipitator according to §§ 63.7525 and 63.7535; and
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average total secondary electric power input at or above the operating limits established during the performance test according to § 63.7530(b).
8. Emission limits using fuel analysis	a. Conduct monthly fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart; and
	b. Reduce the data to 12-month rolling averages; and
	c. Maintain the 12-month rolling average at or below the applicable emission limit for HCl or mercury or TSM in Tables 1 and 2 or 11 through 13 to this subpart.
9. Oxygen content	a. Continuously monitor the oxygen content using an oxygen analyzer system according to § 63.7525(a). This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in § 63.7525(a)(2).
	b. Reducing the data to 30-day rolling averages; and
	c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the most recent CO performance test.
10. Boiler or process heater operating load	a. Collecting operating load data or steam generation data every 15 minutes.
	b. Maintaining the operating load such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most

If you must meet the following operating limits or work practice standards . . .	You must demonstrate continuous compliance by . . .
	recent performance test according to § 63.7520(c).
11. SO_2emissions using SO_2CEMS	a. Collecting the SO_2CEMS output data according to § 63.7525;
	b. Reducing the data to 30-day rolling averages; and
	c. Maintaining the 30-day rolling average SO_2CEMS emission rate to a level at or below the minimum hourly SO_2rate measured during the most recent HCl performance test according to § 63.7530.

[78 FR 7204, Jan. 31, 2013]

Table 9 to Subpart DDDDD of Part 63—Reporting Requirements

As stated in § 63.7550, you must comply with the following requirements for reports:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. Information required in § 63.7550(c)(1) through (5); and	Semiannually, annually, biennially, or every 5 years according to the requirements in § 63.7550(b).
	b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and	
	c. If you have a deviation from any emission limitation (emission limit and operating limit) where you are not using a CMS to comply with that emission limit or operating limit, or a deviation from a work practice standard during the reporting period, the report must contain the information in § 63.7550(d); and	
	d. If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), or otherwise not operating, the report must contain the information in § 63.7550(e)	

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

Citation	Subject	Applies to subpart DDDDD
§ 63.1	Applicability	Yes.
§ 63.2	Definitions	Yes. Additional terms defined in § 63.7575
§ 63.3	Units and Abbreviations	Yes.
§ 63.4	Prohibited Activities and Circumvention	Yes.
§ 63.5	Preconstruction Review and Notification Requirements	Yes.
§ 63.6(a), (b)(1)-(b)(5), (b)(7), (c)	Compliance with Standards and Maintenance Requirements	Yes.
§ 63.6(e)(1)(i)	General duty to minimize emissions.	No. See § 63.7500(a)(3) for the general duty requirement.
§ 63.6(e)(1)(ii)	Requirement to correct malfunctions as soon as practicable.	No.
§ 63.6(e)(3)	Startup, shutdown, and malfunction plan requirements.	No.
§ 63.6(f)(1)	Startup, shutdown, and malfunction exemptions for compliance with non-opacity emission standards.	No.
§ 63.6(f)(2) and (3)	Compliance with non-opacity emission standards.	Yes.
§ 63.6(g)	Use of alternative standards	Yes.
§ 63.6(h)(1)	Startup, shutdown, and malfunction exemptions to opacity standards.	No. See § 63.7500(a).
§ 63.6(h)(2) to (h)(9)	Determining compliance with opacity emission standards	Yes.
§ 63.6(i)	Extension of compliance	Yes. Note: Facilities may also request extensions of compliance for the

Citation	Subject	Applies to subpart DDDDD
		installation of combined heat and power, waste heat recovery, or gas pipeline or fuel feeding infrastructure as a means of complying with this subpart.
§ 63.6(j)	Presidential exemption.	Yes.
§ 63.7(a), (b), (c), and (d)	Performance Testing Requirements	Yes.
§ 63.7(e)(1)	Conditions for conducting performance tests	No. Subpart DDDDD specifies conditions for conducting performance tests at § 63.7520(a) to (c).
§ 63.7(e)(2)-(e)(9), (f), (g), and (h)	Performance Testing Requirements	Yes.
§ 63.8(a) and (b)	Applicability and Conduct of Monitoring	Yes.
§ 63.8(c)(1)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(i)	General duty to minimize emissions and CMS operation	No. See § 63.7500(a)(3).
§ 63.8(c)(1)(ii)	Operation and maintenance of CMS	Yes.
§ 63.8(c)(1)(iii)	Startup, shutdown, and malfunction plans for CMS	No.
§ 63.8(c)(2) to (c)(9)	Operation and maintenance of CMS	Yes.
§ 63.8(d)(1) and (2)	Monitoring Requirements, Quality Control Program	Yes.
§ 63.8(d)(3)	Written procedures for CMS	Yes, except for the last sentence, which refers to a startup, shutdown, and malfunction plan. Startup, shutdown, and malfunction plans are not required.
§ 63.8(e)	Performance evaluation of a CMS	Yes.
§ 63.8(f)	Use of an alternative monitoring method.	Yes.
§ 63.8(g)	Reduction of monitoring data	Yes.
§ 63.9	Notification Requirements	Yes.
§ 63.10(a), (b)(1)	Recordkeeping and Reporting Requirements	Yes.
§ 63.10(b)(2)(i)	Recordkeeping of	Yes.

Citation	Subject	Applies to subpart DDDDD
	occurrence and duration of startups or shutdowns	
§ 63.10(b)(2)(ii)	Recordkeeping of malfunctions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(b)(2)(iii)	Maintenance records	Yes.
§ 63.10(b)(2)(iv) and (v)	Actions taken to minimize emissions during startup, shutdown, or malfunction	No.
§ 63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions	Yes.
§ 63.10(b)(2)(vii) to (xiv)	Other CMS requirements	Yes.
§ 63.10(b)(3)	Recordkeeping requirements for applicability determinations	No.
§ 63.10(c)(1) to (9)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(10) and (11)	Recording nature and cause of malfunctions, and corrective actions	No. See § 63.7555(d)(7) for recordkeeping of occurrence and duration and § 63.7555(d)(8) for actions taken during malfunctions.
§ 63.10(c)(12) and (13)	Recordkeeping for sources with CMS	Yes.
§ 63.10(c)(15)	Use of startup, shutdown, and malfunction plan	No.
§ 63.10(d)(1) and (2)	General reporting requirements	Yes.
§ 63.10(d)(3)	Reporting opacity or visible emission observation results	No.
§ 63.10(d)(4)	Progress reports under an extension of compliance	Yes.
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No. See § 63.7550(c)(11) for malfunction reporting requirements.
§ 63.10(e)	Additional reporting requirements for sources with CMS	Yes.
§ 63.10(f)	Waiver of recordkeeping or reporting requirements	Yes.
§ 63.11	Control Device Requirements	No.

Citation	Subject	Applies to subpart DDDDD
§ 63.12	State Authority and Delegation	Yes.
§ 63.13-63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions	Yes.
§ 63.1(a)(5),(a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved	No.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013]

Table 11 to Subpart DDDDD of Part 63—Toxic Equivalency Factors for Dioxins/Furans

TABLE 11 TO SUBPART DDDDD OF PART 63—TOXIC EQUIVALENCY FACTORS FOR DIOXINS/FURANS

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.3
1,2,3,7,8-pentachlorinated dibenzofuran	0.03
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
octachlorinated dibenzofuran	0.0003

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7206, Jan. 31, 2013, Table 11 was added, effective Apr. 1, 2013. However Table 11 could not be added as a Table 11 is already in existence.

Table 12 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After June 4, 2010, and Before May 20, 2011

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
1. Units in all subcategories designed to burn solid fuel	a. Mercury	3.5E-06 lb per MMBtu of heat input	For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
2. Units in all subcategories designed to burn solid fuel that combust at least 10 percent biomass/bio-based solids on an annual heat input basis and less than 10 percent coal/solid fossil fuels on an annual heat input basis	a. Particulate Matter	0.008 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 1 dscm per run.
	b. Hydrogen Chloride	0.004 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
3. Units in all subcategories designed to burn solid fuel that combust at least 10 percent coal/solid fossil fuels on an annual heat input basis and less than 10 percent biomass/bio-based solids on an annual heat input basis	a. Particulate Matter	0.0011 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 3 dscm per run.
	b. Hydrogen Chloride	0.0022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
4. Units designed to burn pulverized coal/solid fossil fuel	a. CO	90 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
5. Stokers designed to burn coal/solid fossil fuel	a. CO	7 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
6. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO	30 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
7. Stokers designed to burn biomass/bio-based solids	a. CO	560 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.005 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO	260 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.02 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
9. Suspension burners/Dutch Ovens designed to burn biomass/bio-based solids	a. CO	1,010 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.2 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
10. Fuel cells designed to burn biomass/bio-based solids	a. CO	470 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.003 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
11. Hybrid suspension/grate units designed to burn biomass/bio-based solids	a. CO	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Dioxins/Furans	0.2 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
12. Units designed to burn liquid fuel	a. Particulate Matter	0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 2 dscm per run.
	b. Hydrogen Chloride	0.0032 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
	c. Mercury	3.0E-07 lb per MMBtu of heat input	For M29, collect a minimum of 2 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
	d. CO	3 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
13. Units designed to burn liquid fuel located in non-continental States and territories	a. Particulate Matter	0.002 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 2 dscm per run.
	b. Hydrogen Chloride	0.0032 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
	c. Mercury	7.8E-07 lb per MMBtu of heat input	For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
	d. CO	51 ppm by volume on a dry basis corrected	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory	For the following pollutants	The emissions must not exceed the following emission limits, except during periods of startup and shutdown	Using this specified sampling volume or test run duration
		to 3 percent oxygen	
	e. Dioxins/Furans	0.002 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.
14. Units designed to burn gas 2 (other) gases	a. Particulate Matter	0.0067 lb per MMBtu of heat input (30-day rolling average for units 250 MMBtu/hr or greater, 3-run average for units less than 250 MMBtu/hr)	Collect a minimum of 1 dscm per run.
	b. Hydrogen Chloride	0.0017 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26, collect a minimum of 60 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 1 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [a]collect a minimum of 2 dscm.
	d. CO	3 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	e. Dioxins/Furans	0.08 ng/dscm (TEQ) corrected to 7 percent oxygen	Collect a minimum of 4 dscm per run.

[a] Incorporated by reference, see § 63.14.

[76 FR 15664, Mar. 21, 2011]

EDITORIAL NOTE: At 78 FR 7208, Jan. 31, 2013, Table 12 was added, effective Apr. 1, 2013. However, Table 12 could not be added as a Table 12 is already in existence.

Table 13 to Subpart DDDDD of Part 63—Alternative Emission Limits for New or Reconstructed Boilers and Process Heaters That Commenced Construction or Reconstruction After December 23, 2011, and Before January 31, 2013

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
1. Units in all subcategories designed to burn solid fuel	a. HCl	0.022 lb per MMBtu of heat input	For M26A, collect a minimum of 1 dscm per run; for M26 collect a minimum of 120 liters per run.
	b. Mercury	8.6E-07 [a]lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
2. Pulverized coal boilers designed to burn coal/solid fossil fuel	a. Carbon monoxide (CO) (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (320 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.8E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
3. Stokers designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (340 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.8E-02 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
4. Fluidized bed units designed to burn coal/solid fossil fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (230 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
5. Fluidized bed units with an integrated heat exchanger designed to burn coal/solid fossil fuel	a. CO (or CEMS)	140 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (150 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 lb per MMBtu of heat input; or (2.3E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
6. Stokers/sloped grate/others designed to burn wet biomass fuel	a. CO (or CEMS)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (410 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.0E-02 lb per MMBtu of heat input; or (2.6E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
7. Stokers/sloped grate/others designed to burn kiln-dried biomass fuel	a. CO	460 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.2E-01 lb per MMBtu of heat input; or (4.0E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
8. Fluidized bed units designed to burn biomass/bio-based solids	a. CO (or CEMS)	230 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (310 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	9.8E-03 lb per MMBtu of heat input; or (8.3E-05 [a]lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
9. Suspension burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (2,000 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	5.1E-02 lb per MMBtu of heat input; or (6.5E-03 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
10. Dutch Ovens/Pile burners designed to burn biomass/bio-based solids	a. CO (or CEMS)	810 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (520 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	3.6E-02 lb per MMBtu of heat input; or (3.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
11. Fuel cell units	a. CO	910 ppm by volume on a dry	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	For the following pollutants . . .	The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .	Using this specified sampling volume or test run duration . . .
designed to burn biomass/bio-based solids		basis corrected to 3 percent oxygen	
	b. Filterable PM (or TSM)	2.0E-02 lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
12. Hybrid suspension grate boiler designed to burn biomass/bio-based solids	a. CO (or CEMS)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (900 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	2.6E-02 lb per MMBtu of heat input; or (4.4E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
13. Units designed to burn liquid fuel	a. HCl	1.2E-03 lb per MMBtu of heat input	For M26A: Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	b. Mercury	4.9E-07 [a]lb per MMBtu of heat input	For M29, collect a minimum of 4 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 4 dscm.
14. Units designed to burn heavy liquid fuel	a. CO (or CEMS)	130 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (18 ppm by volume on a dry basis corrected to 3 percent oxygen, 10-day rolling average)	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.3E-03 lb per MMBtu of heat input; or (7.5E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
15. Units designed to burn light liquid fuel	a. CO (or CEMS)	130 [a]ppm by volume on a dry basis corrected to 3 percent oxygen; or (60 ppm by volume on a dry basis corrected to 3 percent oxygen, 1-day block average).	1 hr minimum sampling time.
	b. Filterable PM (or TSM)	1.1E-03 [a]lb per MMBtu of heat input; or (2.9E-05 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.
16. Units designed to burn liquid fuel that are	a. CO	130 ppm by volume on a dry basis corrected to 3 percent	1 hr minimum sampling time.

If your boiler or process heater is in this subcategory . . .	**For the following pollutants . . .**	**The emissions must not exceed the following emission limits, except during periods of startup and shutdown . . .**	**Using this specified sampling volume or test run duration . . .**
non-continental units		oxygen, 3-run average based on stack test; or (91 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-hour rolling average)	
	b. Filterable PM (or TSM)	2.3E-02 lb per MMBtu of heat input; or (8.6E-04 lb per MMBtu of heat input)	Collect a minimum of 2 dscm per run.
17. Units designed to burn gas 2 (other) gases	a. CO	130 ppm by volume on a dry basis corrected to 3 percent oxygen	1 hr minimum sampling time.
	b. HCl	1.7E-03 lb per MMBtu of heat input	For M26A, Collect a minimum of 2 dscm per run; for M26, collect a minimum of 240 liters per run.
	c. Mercury	7.9E-06 lb per MMBtu of heat input	For M29, collect a minimum of 3 dscm per run; for M30A or M30B, collect a minimum sample as specified in the method; for ASTM D6784 [b]collect a minimum of 3 dscm.
	d. Filterable PM (or TSM)	6.7E-03 lb per MMBtu of heat input; or (2.1E-04 lb per MMBtu of heat input)	Collect a minimum of 3 dscm per run.

[a] If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit and you are not required to conduct testing for CEMS or CPMS monitor certification, you can skip testing according to § 63.7515 if all of the other provision of § 63.7515 are met. For all other pollutants that do not contain a footnote “a”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

[b] Incorporated by reference, see § 63.14.

[78 FR 7210, Jan. 31, 2013]

Attachment D to a Part 70 Operating Permit

Standards of Performance for Performance for Stationary Combustion Turbines [40 CFR Part 60, Subpart KKKK] [326 IAC 12]

Subpart KKKK—Standards of Performance for Stationary Combustion Turbines

Source: 71 FR 38497, July 6, 2006, unless otherwise noted.

Introduction

§ 60.4300 What is the purpose of this subpart?

This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

Applicability

§ 60.4305 Does this subpart apply to my stationary combustion turbine?

(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.

(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part.

§ 60.4310 What types of operations are exempt from these standards of performance?

(a) Emergency combustion turbines, as defined in §60.4420(i), are exempt from the nitrogen oxides (NO_X) emission limits in §60.4320.

(b) Stationary combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements are exempt from the NO_Xemission limits in §60.4320 on a case-by-case basis as determined by the Administrator.

(c) Stationary combustion turbines at integrated gasification combined cycle electric utility steam generating units that are subject to subpart Da of this part are exempt from this subpart.

(d) Combustion turbine test cells/stands are exempt from this subpart.

Emission Limits

§ 60.4315 What pollutants are regulated by this subpart?

The pollutants regulated by this subpart are nitrogen oxide (NO_X) and sulfur dioxide (SO_2).

§ 60.4320 What emission limits must I meet for nitrogen oxides (NOX)?

(a) You must meet the emission limits for NO_Xspecified in Table 1 to this subpart.

(b) If you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NO_X.

§ 60.4325 What emission limits must I meet for NOX if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?

You must meet the emission limits specified in Table 1 to this subpart. If your total heat input is greater than or equal to 50 percent natural gas, you must meet the corresponding limit for a natural gas-fired turbine when you are burning that fuel. Similarly, when your total heat input is greater than 50 percent distillate oil and fuels other than natural gas, you must meet the corresponding limit for distillate oil and fuels other than natural gas for the duration of the time that you burn that particular fuel.

§ 60.4330 What emission limits must I meet for sulfur dioxide (SO_2)?

(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section. If your turbine is located in Alaska, you do not have to comply with the requirements in paragraph (a) of this section until January 1, 2008.

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output;

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement; or

(3) For each stationary combustion turbine burning at least 50 percent biogas on a calendar month basis, as determined based on total heat input, you must not cause to be discharged into the atmosphere from the affected source any gases that contain SO_2in excess of 65 ng SO_2/J (0.15 lb SO_2/MMBtu) heat input.

(b) If your turbine is located in a noncontinental area or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit, you must comply with one or the other of the following conditions:

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2in excess of 780 ng/J (6.2 lb/MWh) gross output, or

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total sulfur with potential sulfur emissions in excess of 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]

General Compliance Requirements

§ 60.4333 What are my general requirements for complying with this subpart?

(a) You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(b) When an affected unit with heat recovery utilizes a common steam header with one or more combustion turbines, the owner or operator shall either:

(1) Determine compliance with the applicable NO_Xemissions limits by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or

(2) Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

Monitoring

§ 60.4335 How do I demonstrate compliance for NOXif I use water or steam injection?

(a) If you are using water or steam injection to control NO_Xemissions, you must install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.

(b) Alternatively, you may use continuous emission monitoring, as follows:

(1) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO_Xmonitor and a diluent gas (oxygen (O_2) or carbon dioxide (CO_2)) monitor, to determine the hourly NO_Xemission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and

(2) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and

(3) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and

(4) For combined heat and power units complying with the output-based standard, install, calibrate, maintain, and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).

§ 60.4340 How do I demonstrate continuous compliance for NOXif I do not use water or steam injection?

(a) If you are not using water or steam injection to control NO_Xemissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_Xemission result from the performance test is less than or equal to 75 percent of the NO_Xemission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous

performance test). If the results of any subsequent performance test exceed 75 percent of the NO_Xemission limit for the turbine, you must resume annual performance tests.

(b) As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:

(1) Continuous emission monitoring as described in §§60.4335(b) and 60.4345, or

(2) Continuous parameter monitoring as follows:

(i) For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NO_Xformation characteristics, and you must monitor these parameters continuously.

(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_Xmode.

(iii) For any turbine that uses SCR to reduce NO_Xemissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.

(iv) For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the NO_Xemission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix E or in §75.19(c)(1)(iv)(H).

§ 60.4345 What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?

If the option to use a NO_XCEMS is chosen:

(a) Each NO_Xdiluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_Xdiluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

(b) As specified in §60.13(e)(2), during each full unit operating hour, both the NO_Xmonitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO_Xemission rate for the hour.

(c) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

(d) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

(e) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter.

§ 60.4350 How do I use data from the continuous emission monitoring equipment to identify excess emissions?

For purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NO_X and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_X emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O_2 concentration exceeds 19.0 percent O_2 (or the hourly average CO_2 concentration is less than 1.0 percent CO_2), a diluent cap value of 19.0 percent O_2 or 1.0 percent CO_2 (as applicable) may be used in the emission calculations.

(c) Correction of measured NO_X concentrations to 15 percent O_2 is not allowed.

(d) If you have installed and certified a NO_X diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NO_X emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:

(1) For simple-cycle operation:

$$E = \frac{(NO_x)_h * (HI)_h}{P} \qquad \text{(Eq. 1)}$$

Where:

E = hourly NO_X emission rate, in lb/MWh,

$(NO_X)_h$ = hourly NO_X emission rate, in lb/MMBtu,

$(HI)_h$ = hourly heat input rate to the unit, in MMBtu/h, measured using the fuel flowmeter(s), *e.g.* , calculated using Equation D–15a in appendix D to part 75 of this chapter, and

P = gross energy output of the combustion turbine in MW.

(2) For combined-cycle and combined heat and power complying with the output-based standard, use Equation 1 of this subpart, except that the gross energy output is calculated as the sum of the total electrical and mechanical energy generated by the combustion turbine, the additional electrical or mechanical energy (if any) generated by the steam turbine following the heat recovery steam generator, and 100 percent of the total useful thermal energy output that is not used to generate additional electricity or mechanical output, expressed in equivalent MW, as in the following equations:

$$P = (Pe)_t + (Pe)_c + Ps + Po \qquad \text{(Eq. 2)}$$

Where:

P = gross energy output of the stationary combustion turbine system in MW.

$(Pe)_t$= electrical or mechanical energy output of the combustion turbine in MW,

$(Pe)_c$= electrical or mechanical energy output (if any) of the steam turbine in MW, and

$$Ps = \frac{Q * H}{3.413 \times 10^6 \text{ Btu/MWh}} \qquad \text{(Eq. 3)}$$

Where:

Ps = useful thermal energy of the steam, measured relative to ISO conditions, not used to generate additional electric or mechanical output, in MW,

Q = measured steam flow rate in lb/h,

H = enthalpy of the steam at measured temperature and pressure relative to ISO conditions, in Btu/lb, and 3.413 x 10_6= conversion from Btu/h to MW.

Po = other useful heat recovery, measured relative to ISO conditions, not used for steam generation or performance enhancement of the combustion turbine.

(3) For mechanical drive applications complying with the output-based standard, use the following equation:

$$E = \frac{(NO_x)_m}{BL * AL} \qquad \text{(Eq. 4)}$$

Where:

E = NO_Xemission rate in lb/MWh,

$(NO_X)_m$= NO_Xemission rate in lb/h,

BL = manufacturer's base load rating of turbine, in MW, and

AL = actual load as a percentage of the base load.

(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 4-hour rolling average basis, as described in §60.4380(b)(1).

(h) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 30 unit operating day rolling average basis, as described in §60.4380(b)(1).

§ 60.4355 How do I establish and document a proper parameter monitoring plan?

(a) The steam or water to fuel ratio or other parameters that are continuously monitored as described in §§60.4335 and 60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values

and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_Xemission controls. The plan must:

(1) Include the indicators to be monitored and show there is a significant relationship to emissions and proper operation of the NO_Xemission controls,

(2) Pick ranges (or designated conditions) of the indicators, or describe the process by which such range (or designated condition) will be established,

(3) Explain the process you will use to make certain that you obtain data that are representative of the emissions or parameters being monitored (such as detector location, installation specification if applicable),

(4) Describe quality assurance and control practices that are adequate to ensure the continuing validity of the data,

(5) Describe the frequency of monitoring and the data collection procedures which you will use (e.g., you are using a computerized data acquisition over a number of discrete data points with the average (or maximum value) being used for purposes of determining whether an exceedance has occurred), and

(6) Submit justification for the proposed elements of the monitoring. If a proposed performance specification differs from manufacturer recommendation, you must explain the reasons for the differences. You must submit the data supporting the justification, but you may refer to generally available sources of information used to support the justification. You may rely on engineering assessments and other data, provided you demonstrate factors which assure compliance or explain why performance testing is unnecessary to establish indicator ranges. When establishing indicator ranges, you may choose to simplify the process by treating the parameters as if they were correlated. Using this assumption, testing can be divided into two cases:

(i) All indicators are significant only on one end of range (e.g., for a thermal incinerator controlling volatile organic compounds (VOC) it is only important to insure a minimum temperature, not a maximum). In this case, you may conduct your study so that each parameter is at the significant limit of its range while you conduct your emissions testing. If the emissions tests show that the source is in compliance at the significant limit of each parameter, then as long as each parameter is within its limit, you are presumed to be in compliance.

(ii) Some or all indicators are significant on both ends of the range. In this case, you may conduct your study so that each parameter that is significant at both ends of its range assumes its extreme values in all possible combinations of the extreme values (either single or double) of all of the other parameters. For example, if there were only two parameters, A and B, and A had a range of values while B had only a minimum value, the combinations would be A high with B minimum and A low with B minimum. If both A and B had a range, the combinations would be A high and B high, A low and B low, A high and B low, A low and B high. For the case of four parameters all having a range, there are 16 possible combinations.

(b) For affected units that are also subject to part 75 of this chapter and that have state approval to use the low mass emissions methodology in §75.19 or the NO_Xemission measurement methodology in appendix E to part 75, you may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in §75.19(e)(5) or in section 2.3 of appendix E to part 75 of this chapter and section 1.3.6 of appendix B to part 75 of this chapter.

§ 60.4360 How do I determine the total sulfur content of the turbine's combustion fuel?

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

§ 60.4365 How can I be exempted from monitoring the total sulfur content of the fuel?

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for units located in continental areas and 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for noncontinental areas; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas or 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

§ 60.4370 How often must I determine the sulfur content of the fuel?

The frequency of determining the sulfur content of the fuel must be as follows:

(a) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (*i.e.* , flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

(b) *Gaseous fuel.* If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.

(c) *Custom schedules.* Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

(1) The two custom sulfur monitoring schedules set forth in paragraphs (c)(1)(i) through (iv) and in paragraph (c)(2) of this section are acceptable, without prior Administrative approval:

(i) The owner or operator shall obtain daily total sulfur content measurements for 30 consecutive unit operating days, using the applicable methods specified in this subpart. Based on the results of the 30 daily samples, the required frequency for subsequent monitoring of the fuel's total sulfur content shall be as specified in paragraph (c)(1)(ii), (iii), or (iv) of this section, as applicable.

(ii) If none of the 30 daily measurements of the fuel's total sulfur content exceeds half the applicable standard, subsequent sulfur content monitoring may be performed at 12-month intervals. If any of the samples taken at 12-month intervals has a total sulfur content greater than half but less than the applicable limit, follow the procedures in paragraph (c)(1)(iii) of this section. If any measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section.

(iii) If at least one of the 30 daily measurements of the fuel's total sulfur content is greater than half but less than the applicable limit, but none exceeds the applicable limit, then:

(A) Collect and analyze a sample every 30 days for 3 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(B) of this section.

(B) Begin monitoring at 6-month intervals for 12 months. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, follow the procedures in paragraph (c)(1)(iii)(C) of this section.

(C) Begin monitoring at 12-month intervals. If any sulfur content measurement exceeds the applicable limit, follow the procedures in paragraph (c)(1)(iv) of this section. Otherwise, continue to monitor at this frequency.

(iv) If a sulfur content measurement exceeds the applicable limit, immediately begin daily monitoring according to paragraph (c)(1)(i) of this section. Daily monitoring shall continue until 30 consecutive daily samples, each having a sulfur content no greater than the applicable limit, are obtained. At that point, the applicable procedures of paragraph (c)(1)(ii) or (iii) of this section shall be followed.

(2) The owner or operator may use the data collected from the 720-hour sulfur sampling demonstration described in section 2.3.6 of appendix D to part 75 of this chapter to determine a custom sulfur sampling schedule, as follows:

(i) If the maximum fuel sulfur content obtained from the 720 hourly samples does not exceed 20 grains/100 scf, no additional monitoring of the sulfur content of the gas is required, for the purposes of this subpart.

(ii) If the maximum fuel sulfur content obtained from any of the 720 hourly samples exceeds 20 grains/100 scf, but none of the sulfur content values (when converted to weight percent sulfur) exceeds half the applicable limit, then the minimum required sampling frequency shall be one sample at 12 month intervals.

(iii) If any sample result exceeds half the applicable limit, but none exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iii) of this section.

(iv) If the sulfur content of any of the 720 hourly samples exceeds the applicable limit, follow the provisions of paragraph (c)(1)(iv) of this section.

Reporting

§ 60.4375 What reports must I submit?

(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with §60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

(b) For each affected unit that performs annual performance tests in accordance with §60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

§ 60.4380 How are excess emissions and monitor downtime defined for NOX?

For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(a) For turbines using water or steam to fuel ratio monitoring:

(1) An excess emission is any unit operating hour for which the 4-hour rolling average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.4320, as established during the performance test required in §60.8. Any unit operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water or steam injection for NO_Xcontrol will also be considered an excess emission.

(2) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.

(3) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission.

(b) For turbines using continuous emission monitoring, as described in §§60.4335(b) and 60.4345:

(1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_Xemission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a “4-hour rolling average NO_Xemission rate” is the arithmetic average of the average NO_Xemission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_Xemission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_Xemission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NO_Xemission rate” is the arithmetic average of all hourly NO_Xemission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_Xemissions rates for the preceding 30 unit operating days if a valid NO_Xemission rate is obtained for at least 75 percent of all operating hours.

(2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_Xconcentration, CO2 or O_2concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NO_Xemission controls:

(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

§ 60.4385 How are excess emissions and monitoring downtime defined for SO_2?

If you choose the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

(a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.

(c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

§ 60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine?

(a) If you operate an emergency combustion turbine, you are exempt from the NO_X limit and must submit an initial report to the Administrator stating your case.

(b) Combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements may be exempted from the NO_X limit on a case-by-case basis as determined by the Administrator. You must petition for the exemption.

§ 60.4395 When must I submit my reports?

All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

Performance Tests

§ 60.4400 How do I conduct the initial and subsequent performance tests, regarding NOX?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent NO_X performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

(1) There are two general methodologies that you may use to conduct the performance tests. For each test run:

(i) Measure the NO_X concentration (in parts per million (ppm)), using EPA Method 7E or EPA Method 20 in appendix A of this part. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NO_X emission rate:

$$E = \frac{1.194 \times 10^{-7} * (NO_X)_c * Q_{std}}{P} \qquad \text{(Eq. 5)}$$

Where:

E = NO_X emission rate, in lb/MWh

1.194×10^{-7} = conversion constant, in lb/dscf-ppm

$(NO_X)_c$ = average NO_X concentration for the run, in ppm

Q_{std} = stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(ii) Measure the $NO_X$and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in appendix A of this part. Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the NO_Xemission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the NO_Xemission rate in lb/MWh.

(2) Sampling traverse points for $NO_X$and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

(3) Notwithstanding paragraph (a)(2) of this section, you may test at fewer points than are specified in EPA Method 1 or EPA Method 20 in appendix A of this part if the following conditions are met:

(i) You may perform a stratification test for $NO_X$and diluent pursuant to

(A) [Reserved], or

(B) The procedures specified in section 6.5.6.1(a) through (e) of appendix A of part 75 of this chapter.

(ii) Once the stratification sampling is completed, you may use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_Xconcentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5ppm or ±0.5 percent CO_2(or O_2) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO_Xconcentration during the stratification test; or

(B) For turbines with a NO_Xstandard greater than 15 ppm @ 15% O_2, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_Xconcentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3ppm or ±0.3 percent CO_2(or O_2) from the mean for all traverse points; or

(C) For turbines with a NO_Xstandard less than or equal to 15 ppm @ 15% O_2, you may sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_Xconcentrations is within ±2.5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±1ppm or ±0.15 percent CO_2(or O_2) from the mean for all traverse points.

(b) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. You may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. You must conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(1) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(2) For a combined cycle and CHP turbine systems with supplemental heat (duct burner), you must measure the total NO_Xemissions after the duct burner rather than directly after the turbine. The duct burner must be in operation during the performance test.

(3) If water or steam injection is used to control $NO_X$with no additional post-combustion NO_Xcontrol and you choose to monitor the steam or water to fuel ratio in accordance with §60.4335, then that monitoring system must be operated concurrently with each EPA Method 20 or EPA Method 7E run and must be used to determine the fuel consumption and the steam or water to fuel ratio necessary to comply with the applicable §60.4320 NO_Xemission limit.

(4) Compliance with the applicable emission limit in §60.4320 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_Xemission rate at each tested level meets the applicable emission limit in §60.4320.

(5) If you elect to install a CEMS, the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405) as part of the initial performance test of the affected unit.

(6) The ambient temperature must be greater than 0 °F during the performance test.

§ 60.4405 How do I perform the initial performance test if I have chosen to install a NOX-diluent CEMS?

If you elect to install and certify a NO_X-diluent CEMS under §60.4345, then the initial performance test required under §60.8 may be performed in the following alternative manner:

(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 °F during the RATA runs.

(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.

(c) Use the test data both to demonstrate compliance with the applicable NO_Xemission limit under §60.4320 and to provide the required reference method data for the RATA of the CEMS described under §60.4335.

(d) Compliance with the applicable emission limit in §60.4320 is achieved if the arithmetic average of all of the NO_Xemission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

§ 60.4410 How do I establish a valid parameter range if I have chosen to continuously monitor parameters?

If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NO_Xemission controls in accordance with §60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in §60.4355.

§ 60.4415 How do I conduct the initial and subsequent performance tests for sulfur?

(a) You must conduct an initial performance test, as required in §60.8. Subsequent SO_2performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

(i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17); or

(ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

(2) Measure the SO_2concentration (in parts per million (ppm)), using EPA Methods 6, 6C, 8, or 20 in appendix A of this part. In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 19–10–1981–Part 10, “Flue and Exhaust Gas Analyses,” manual methods for sulfur dioxide (incorporated by reference, see §60.17) can be used instead of EPA Methods 6 or 20. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in appendix A of this part, and measure and record the electrical and thermal output from the unit. Then use the following equation to calculate the SO_2emission rate:

$$E = \frac{1.664 \times 10^{-7} * (SO_2)_c * Q_{std}}{P} \qquad \text{(Eq. 6)}$$

Where:

E = SO_2emission rate, in lb/MWh

1.664×10^{-7}= conversion constant, in lb/dscf-ppm

$(SO_2)_c$= average SO_2concentration for the run, in ppm

Q_{std}= stack gas volumetric flow rate, in dscf/hr

P = gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to §60.4350(f)(2); or

(3) Measure the $SO_2$and diluent gas concentrations, using either EPA Methods 6, 6C, or 8 and 3A, or 20 in appendix A of this part. In addition, you may use the manual methods for sulfur dioxide ASME PTC 19–10–1981–Part 10 (incorporated by reference, see §60.17). Concurrently measure the heat input to the unit, using a fuel flowmeter (or flowmeters), and measure the electrical and thermal output of the unit. Use EPA Method 19 in appendix A of this part to calculate the SO_2emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in §60.4350(f) to calculate the SO_2emission rate in lb/MWh.

(b) [Reserved]

Definitions

§ 60.4420 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein will have the meaning given them in the Clean Air Act and in subpart A (General Provisions) of this part.

Biogas means gas produced by the anaerobic digestion or fermentation of organic matter including manure, sewage sludge, municipal solid waste, biodegradable waste, or any other biodegradable feedstock, under anaerobic conditions. Biogas is comprised primarily of methane and CO_2.

Combined cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to generate steam that is only used to create additional power output in a steam turbine.

Combined heat and power combustion turbine means any stationary combustion turbine which recovers heat from the exhaust gases to heat water or another medium, generate steam for useful purposes other than additional electric generation, or directly uses the heat in the exhaust gases for a useful purpose.

Combustion turbine model means a group of combustion turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

Combustion turbine test cell/stand means any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) combustion turbines.

Diffusion flame stationary combustion turbine means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary combustion turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

Efficiency means the combustion turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output—based on the higher heating value of the fuel.

Emergency combustion turbine means any stationary combustion turbine which operates in an emergency situation. Examples include stationary combustion turbines used to produce power for critical networks or equipment, including power supplied to portions of a facility, when electric power from the local utility is interrupted, or stationary combustion turbines used to pump water in the case of fire or flood, etc. Emergency stationary combustion turbines do not include stationary combustion turbines used as peaking units at electric utilities or stationary combustion turbines at industrial facilities that typically operate at low capacity factors. Emergency combustion turbines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are required by the manufacturer, the vendor, or the insurance company associated with the turbine. Required testing of such units should be minimized, but there is no time limit on the use of emergency combustion turbines.

Excess emissions means a specified averaging period over which either (1) the NO_Xemissions are higher than the applicable emission limit in §60.4320; (2) the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in §60.4330; or (3) the recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.

Gross useful output means the gross useful work performed by the stationary combustion turbine system. For units using the mechanical energy directly or generating only electricity, the gross useful work performed is the gross electrical or mechanical output from the turbine/generator set. For combined heat and power units, the gross useful work performed is the gross electrical or mechanical output plus the useful thermal output (i.e., thermal energy delivered to a process).

Heat recovery steam generating unit means a unit where the hot exhaust gases from the combustion turbine are routed in order to extract heat from the gases and generate steam, for use in a steam turbine or other device that utilizes steam. Heat recovery steam generating units can be used with or without duct burners.

Integrated gasification combined cycle electric utility steam generating unit means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No solid coal is directly burned in the unit during operation.

ISO conditions means 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.

Lean premix stationary combustion turbine means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture before delivery to the combustor. Mixing may occur before or in the combustion chamber. A lean premixed turbine may operate in diffusion flame mode during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load.

Natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, the Northern Mariana Islands, or offshore platforms.

Peak load means 100 percent of the manufacturer's design capacity of the combustion turbine at ISO conditions.

Regenerative cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.

Simple cycle combustion turbine means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.

Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

Unit operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Unit operating hour means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.

Useful thermal output means the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application, i.e., total thermal energy made available for processes and applications other than electrical or mechanical generation. Thermal output for this subpart means the energy in recovered thermal output measured against the energy in the thermal output at 15 degrees Celsius and 101.325 kilopascals of pressure.

[71 FR 38497, July 6, 2006, as amended at 74 FR 11861, Mar. 20, 2009]

Table 1 to Subpart KKKK of Part 60—Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion	NO_X emission standard

	turbine heat input at peak load (HHV)	
New turbine firing natural gas, electric generating	≤ 50 MMBtu/h	42 ppm at 15 percent O_2 or 290 ng/J of useful output (2.3 lb/MWh).
New turbine firing natural gas, mechanical drive	≤ 50 MMBtu/h	100 ppm at 15 percent O_2 or 690 ng/J of useful output (5.5 lb/MWh).
New turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	25 ppm at 15 percent O_2 or 150 ng/J of useful output (1.2 lb/MWh).
New, modified, or reconstructed turbine firing natural gas	> 850 MMBtu/h	15 ppm at 15 percent O_2 or 54 ng/J of useful output (0.43 lb/MWh)
New turbine firing fuels other than natural gas, electric generating	≤ 50 MMBtu/h	96 ppm at 15 percent O_2 or 700 ng/J of useful output (5.5 lb/MWh).
New turbine firing fuels other than natural gas, mechanical drive	≤ 50 MMBtu/h	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
New turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	74 ppm at 15 percent O_2 or 460 ng/J of useful output (3.6 lb/MWh).
New, modified, or reconstructed turbine firing fuels other than natural gas	> 850 MMBtu/h	42 ppm at 15 percent O_2 or 160 ng/J of useful output (1.3 lb/MWh).
Modified or reconstructed turbine	≤ 50 MMBtu/h	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
Modified or reconstructed turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	42 ppm at 15 percent O_2 or 250 ng/J of useful output (2.0 lb/MWh).
Modified or reconstructed turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh).

Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F	≤ 30 MW output	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F	> 30 MW output	96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh).
Heat recovery units operating independent of the combustion turbine	All sizes	54 ppm at 15 percent O_2 or 110 ng/J of useful output (0.86 lb/MWh).

Attachment E to a Part 70 Operating Permit

Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Db] [326 IAC 12]

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NO_X) standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are subject to the PM and NO_Xstandards under this subpart and to the sulfur dioxide (SO_2) standards under subpart D (§60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NO_Xstandards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are also subject to the NO_Xstandards under this subpart and the PM and SO_2standards under subpart D (§60.42 and §60.43).

(c) Affected facilities that also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; §60.104) are subject to the PM and NO_Xstandards under this subpart and the SO_2standards under subpart J (§60.104).

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the $NO_X$and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under §60.281 is not considered a modification under §60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is subject to subpart Ea, subpart Eb, or subpart AAAA of this part is not covered by this subpart.

(i) Heat recovery steam generators that are associated with combined cycle gas turbines and that meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40).

(k) Any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO_2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, coke oven gas, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Cogeneration , also known as combined heat and power, means a facility that simultaneously produces both electric (or mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Gaseous fuel means any fuel that is a gas at ISO conditions. This includes, but is not limited to, natural gas and gasified coal (including coke oven gas).

Gross output means the gross useful work performed by the steam generated. For units generating only electricity, the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units, the gross useful work performed is the gross electrical or mechanical output plus 75 percent of the useful thermal output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output or to enhance the performance of the unit (*i.e.* , steam delivered to an industrial process).

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems. For gasified coal or oil that is desulfurized prior to combustion, the *Potential sulfur dioxide emission rate* is the theoretical SO_2emissions (ng/J or lb/MMBtu heat input) that would result from combusting fuel in a cleaned state without using any post combustion emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and not located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.30 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.50 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.42b Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction) and the emission limit determined according to the following formula:

$$E_s = \frac{(K_a H_a + K_b H_b)}{(H_a + H_b)}$$

Where:

E_s= SO_2emission limit, in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (or 1.2 lb/MMBtu);

K_b= 340 ng/J (or 0.80 lb/MMBtu);

H_a= Heat input from the combustion of coal, in J (MMBtu); and

H_b= Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) or 20 percent (0.20) of the potential SO_2emission rate (80 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable. For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(c) On and after the date on which the performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of SO_2emissions, shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 50 percent of the potential SO_2emission rate (50 percent reduction) and that contain SO_2in excess of the emission limit determined according to the following formula:

$$E_s = \frac{(K_c H_c + K_d H_d)}{(H_c + H_d)}$$

Where:

E_s= SO2 emission limit, in ng/J or lb/MM Btu heat input;

K_c= 260 ng/J (or 0.60 lb/MMBtu);

K_d= 170 ng/J (or 0.40 lb/MMBtu);

H_c= Heat input from the combustion of coal, in J (MMBtu); and

H_d= Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and listed in paragraphs (d)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/MMBtu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under paragraphs (d)(1), (2), (3) or (4) of this section. For facilities complying with paragraphs (d)(1), (2), or (3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from the exhaust gases entering the duct burner; or

(4) The affected facility burns coke oven gas alone or in combination with natural gas or very low sulfur distillate oil.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section and §60.45b(a), the SO_2emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential SO_2emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential SO_2emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO_2control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the SO_2control system is not being operated because of malfunction or maintenance of the SO_2control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in §60.45b(c) or §60.45b(d), and following the monitoring procedures as described in §60.47b(a) or §60.47b(b) to determine SO_2emission rate or fuel oil sulfur content; or (2) maintaining fuel records as described in §60.49b(r).

(k)(1) Except as provided in paragraphs (k)(2), (k)(3), and (k)(4) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20

lb/MMBtu) heat input or 8 percent (0.08) of the potential SO_2emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. For facilities complying with the percent reduction standard and paragraph (k)(3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in paragraph (k) of this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(2) Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO_2emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO_2emissions limit in paragraph (k)(1) of this section.

(3) Units that are located in a noncontinental area and that combust coal, oil, or natural gas shall not discharge any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.50 lb/MMBtu) heat input if the affected facility combusts oil or natural gas.

(4) As an alternative to meeting the requirements under paragraph (k)(1) of this section, modified facilities that combust coal or a mixture of coal with other fuels shall not cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§ 60.43b Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 that combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input, (i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(4) An affected facility burning coke oven gas alone or in combination with other fuels not subject to a PM standard under §60.43b and not using a post-combustion technology (except a wet scrubber) for reducing PM or SO_2emissions is not subject to the PM limits under §60.43b(a).

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce SO_2emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if (i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood;

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood; and

(iii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input;

(i) If the affected facility combusts only municipal-type solid waste; or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less;

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less;

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for municipal-type solid waste, or municipal-type solid waste and other fuels; and

(iv) Construction of the affected facility commenced after June 19, 1984, but on or before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that can combust coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27

percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(g) The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.

(h)(1) Except as provided in paragraphs (h)(2), (h)(3), (h)(4), (h)(5), and (h)(6) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input,

(2) As an alternative to meeting the requirements of paragraph (h)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity of 73 MW (250 MMBtu/h) or less shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity greater than 73 MW (250 MMBtu/h) shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 37 ng/J (0.085 lb/MMBtu) heat input.

(5) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility not located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.30 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

(6) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.5 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.44b Standard for nitrogen oxides (NOX).

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X(expressed as NO_2) in excess of the following emission limits:

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(1) Natural gas and distillate oil, except (4):		
(i) Low heat release rate	43	0.10
(ii) High heat release rate	86	0.20
(2) Residual oil:		
(i) Low heat release rate	130	0.30
(ii) High heat release rate	170	0.40
(3) Coal:		
(i) Mass-feed stoker	210	0.50
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70
(iv) Lignite, except (v)	260	0.60
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340	0.80
(vi) Coal-derived synthetic fuels	210	0.50
(4) Duct burner used in a combined cycle system:		
(i) Natural gas and distillate oil	86	0.20
(ii) Residual oil	170	0.40

(b) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_Xin excess of a limit determined by the use of the following formula:

$$E_n = \frac{(EL_g H_g) + (EL_o H_o) + (EL_c H_c)}{(H_g + H_o + H_c)}$$

Where:

E_n= NO_Xemission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas or distillate oil, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(c) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain NO_Xin excess of the emission limit for the coal or oil, or mixtures of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_Xin excess of 130 ng/J (0.30 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere any gases that contain NO_Xin excess of the emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{ro}H_{ro}) + (EL_cH_c)}{(H_{go} + H_{ro} + H_c)}$$

Where:

E_n= NO_Xemission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil and/or byproduct/waste, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a NO_Xemission limit that shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as NO_Xemissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific NO_Xemission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, by conducting a 30-day performance test as provided in §60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The NO_Xemission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific NO_Xemission limit will be established at the NO_Xemission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing NO_Xemissions. In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_Xlimit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the NO_Xemission limit that applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on NO_Xemissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the NO_Xemission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the NO_Xemission limits of this section. The NO_Xemission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).) In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_Xlimit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(h) For purposes of paragraph (i) of this section, the NO_X standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NO_X emission limits under this section.

(l) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction or reconstruction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X (expressed as NO_2) in excess of the following limits:

(1) If the affected facility combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels: A limit of 86 ng/J (0.20 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas; or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

$$E_n = \frac{(0.10 \times H_{go}) + (0.20 \times H_r)}{(H_{go} + H_r)}$$

Where:

E_n = NO_X emission limit, (lb/MMBtu);

H_{go} = 30-day heat input from combustion of natural gas or distillate oil; and

H_r = 30-day heat input from combustion of any other fuel.

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this output-based limit must demonstrate compliance according to the procedures of §60.48Da(i) of subpart Da of this part, and must monitor emissions according to §60.49Da(c), (k), through (n) of subpart Da of this part.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2emission standards in §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels or distillate oil are allowed to exceed the limit 30 operating days per calendar year for SO_2control system maintenance.

(b) In conducting the performance tests required under §60.8, the owner or operator shall use the methods and procedures in appendix A (including fuel certification and sampling) of this part or the methods and procedures as specified in this section, except as provided in §60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential SO_2emission rate (% P_s) and the SO_2emission rate (E_s) pursuant to §60.42b following the procedures listed below, except as provided under paragraph (d) and (k) of this section.

(1) The initial performance test shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the SO_2standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal, only oil, or a mixture of coal and oil is combusted, the following procedures are used:

(i) The procedures in Method 19 of appendix A–7 of this part are used to determine the hourly SO_2emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS of §60.47b(a) or (b).

(ii) The percent of potential SO_2emission rate (%P_s) emitted to the atmosphere is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

%P_s= Potential SO_2emission rate, percent;

%R_g= SO_2removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

%R_f= SO_2removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly SO_2emission rate (E_{ho}^{o}) is used in Equation 19–19 of Method 19 of appendix A of this part to compute an adjusted 30-day average emission rate (E_{ao}^{o}). The Eho° is computed using the following formula:

$$E_{ho}^{o} = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

E_{ho}^{o} = Adjusted hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_{ho} = Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted; and

X_k = Fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(ii) To compute the percent of potential SO_2 emission rate ($\%P_s$), an adjusted $\%R_g$ ($\%R_g^{o}$) is computed from the adjusted E_{ao}^{o} from paragraph (b)(3)(i) of this section and an adjusted average SO_2 inlet rate (E_{ai}^{o}) using the following formula:

$$\%R_g^{o} = 100\left(1.0 - \frac{E_{ao}^{o}}{E_{ai}^{o}}\right)$$

To compute E_{ai}^{o}, an adjusted hourly SO_2 inlet rate (E_{hi}^{o}) is used. The E_{hi}^{o} is computed using the following formula:

$$E_{hi}^{o} = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi}^{o} = Adjusted hourly SO_2 inlet rate, ng/J (lb/MMBtu); and

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu).

(4) The owner or operator of an affected facility subject to paragraph (c)(3) of this section does not have to measure parameters E_w or X_k if the owner or operator elects to assume that X_k = 1.0. Owners or operators of affected facilities who assume X_k = 1.0 shall:

(i) Determine $\%P_s$ following the procedures in paragraph (c)(2) of this section; and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with SO_2 emission limits under §60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of §60.42b(d) does not have to measure parameters E_w or X_k in paragraph (c)(3) of this section if the owner or operator of the affected facility elects to measure SO_2 emission rates of the coal or oil following the fuel sampling and analysis procedures in Method 19 of appendix A–7 of this part.

(d) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility that combusts only very low sulfur oil, natural gas, or a mixture of these fuels, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a CEMS is used, or based on a daily average if Method 6B of appendix A of this part or fuel sampling and analysis procedures under Method 19 of appendix A of this part are used.

(e) The owner or operator of an affected facility subject to §60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under §60.8, compliance with the SO_2 emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO_2 for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under §60.8, compliance with the SO_2 emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO_2 for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for SO_2 are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under §60.46b are achieved. All valid emissions data, including valid SO_2 emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating $\%P_s$ and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the SO_2 control systems when oil is combusted as provided under §60.42b(i), emission data are not used to calculate $\%P_s$ or E_s under §60.42b(a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under §60.42b(i).

(j) The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO_2 standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).

(k) The owner or operator of an affected facility seeking to demonstrate compliance in §§60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

Link to an amendment published at 76 FR 3523, Jan. 20, 2011.

(a) The PM emission standards and opacity limits under §60.43b apply at all times except during periods of startup, shutdown, or malfunction. The NO_X emission standards under §60.44b apply at all times.

(b) Compliance with the PM emission standards under §60.43b shall be determined through performance testing as described in paragraph (d) of this section, except as provided in paragraph (i) of this section.

(c) Compliance with the NO_Xemission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the PM emission limits and opacity limits under §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods:

(1) Method 3A or 3B of appendix A–2 of this part is used for gas analysis when applying Method 5 of appendix A–3 of this part or Method 17 of appendix A–6 of this part.

(2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 of appendix A–6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A–3 of this part may be used in Method 17 of appendix A–6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A–6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160±14 °C (320±25 °F).

(5) For determination of PM emissions, the oxygen (O_2) or CO_2sample is obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using:

(i) The O_2or CO_2measurements and PM measurements obtained under this section;

(ii) The dry basis F factor; and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for NO_Xrequired under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_Xunder §60.48(b).

(1) For the initial compliance test, $NO_X$from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_Xemission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed in §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal (except as specified under §60.46b(e)(4)) or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NO_Xemission standards in §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated for each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NO_Xstandards under §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, gasified coal, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_Xstandards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_Xemissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_Xemission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility that combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in §60.49b(e), the requirements of §60.48b(g)(1) apply and the provisions of §60.48b(g)(2) are inapplicable.

(f) To determine compliance with the emissions limits for NO_Xrequired by §60.44b(a)(4) or §60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

(i) The emissions rate (E) of NO_Xshall be computed using Equation 1 in this section:

$$E = E_{sg} + \left(\frac{H_g}{H_b}\right)\left(E_{sg} - E_g\right) \qquad \text{(Eq.1)}$$

Where:

E = Emissions rate of $NO_X$from the duct burner, ng/J (lb/MMBtu) heat input;

E_{sg}= Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part;

H_g= Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);

H_b= Heat input rate to the duct burner, in J/hr (MMBtu/hr); and

E_g= Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part.

(ii) Method 7E of appendix A of this part shall be used to determine the NO_Xconcentrations. Method 3A or 3B of appendix A of this part shall be used to determine O_2concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring $NO_X$and $O_2$and meet the requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_Xemissions rate at the outlet from the steam generating unit shall constitute the NO_Xemissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method or the heat input method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in §60.44b(j) that has a heat input capacity greater than 73 MW (250 MMBtu/hr) shall:

(1) Conduct an initial performance test as required under §60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the NO_Xemission standards under §60.44b using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the NO_Xemission standards under §60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the PM limit in paragraphs §60.43b(a)(4) or §60.43b(h)(5) shall follow the applicable procedures in §60.49b(r).

(j) In place of PM testing with Method 5 or 5B of appendix A–3 of this part, or Method 17 of appendix A–6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall comply with the requirements specified in paragraphs (j)(1) through (j)(14) of this section.

(1) Notify the Administrator one month before starting use of the system.

(2) Notify the Administrator one month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the

Administrator of use of the CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (j) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraphs (j)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (j)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (j)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30-to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and

(ii) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in theFederal Register,whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and

(iii) For O_2(or CO_2), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours per 30-day rolling average.

(14) After July 1, 2011, within 90 days after completing a correlation testing run, the owner or operator of an affected facility shall either successfully enter the test data into EPA's WebFIRE data base located at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main* or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the SO_2standards in §60.42b shall install, calibrate, maintain, and operate CEMS for measuring SO_2concentrations and either O_2or CO_2concentrations and shall record the output of the systems. For units complying with the percent reduction standard, the $SO_2$and either O_2or CO_2concentrations shall both be monitored at the inlet and outlet of the SO_2control device. If the owner or operator has installed and certified $SO_2$and O_2or CO_2CEMS according to the requirements of §75.20(c)(1) of this chapter and appendix A to part 75 of this chapter, and is continuing to meet the ongoing quality assurance requirements of §75.21 of this chapter and appendix B to part 75 of this chapter, those CEMS may be used to meet the requirements of this section, provided that:

(1) When relative accuracy testing is conducted, SO_2concentration data and CO_2(or O_2) data are collected simultaneously; and

(2) In addition to meeting the applicable $SO_2$and CO_2(or O_2) relative accuracy specifications in Figure 2 of appendix B to part 75 of this chapter, the relative accuracy (RA) standard in section 13.2 of Performance Specification 2 in appendix B to this part is met when the RA is calculated on a lb/MMBtu basis; and

(3) The reporting requirements of §60.49b are met. $SO_2$and CO_2(or O_2) data used to meet the requirements of §60.49b shall not include substitute data values derived from the missing data procedures in subpart D of part 75 of this chapter, nor shall the SO_2data have been bias adjusted according to the procedures of part 75 of this chapter.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2input rate, or

(2) Measuring SO_2according to Method 6B of appendix A of this part at the inlet or outlet to the SO_2control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$and CO_2measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 or 3B of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily SO_2emission rate, E_D, shall be determined using the procedure described in Method 6A of appendix A of this part, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/MMBtu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/MMBtu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19 of appendix A of this part.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average SO_2emission rates measured by the CEMS required by paragraph (a) of this section and required under §60.13(h) is expressed in ng/J or lb/MMBtu heat input and is used to calculate the average emission rates under §60.42(b). Each 1-hour average SO_2emission rate must be based on 30 or more minutes of steam generating unit operation. The hourly averages shall be calculated according to §60.13(h)(2). Hourly SO_2emission

rates are not calculated if the affected facility is operated less than 30 minutes in a given clock hour and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) Except as provided for in paragraph (e)(4) of this section, all CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Except as provided for in paragraph (e)(4) of this section, quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the SO_2CEMS at the inlet to the SO_2control device is 125 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO_2control device is 50 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted. Alternatively, SO_2span values determined according to section 2.1.1 in appendix A to part 75 of this chapter may be used.

(4) As an alternative to meeting the requirements of requirements of paragraphs (e)(1) and (e)(2) of this section, the owner or operator may elect to implement the following alternative data accuracy assessment procedures:

(i) For all required $CO_2$and O_2monitors and for $SO_2$and NO_Xmonitors with span values greater than or equal to 100 ppm, the daily calibration error test and calibration adjustment procedures described in sections 2.1.1 and 2.1.3 of appendix B to part 75 of this chapter may be followed instead of the CD assessment procedures in Procedure 1, section 4.1 of appendix F to this part.

(ii) For all required $CO_2$and O_2monitors and for $SO_2$and NO_Xmonitors with span values greater than 30 ppm, quarterly linearity checks may be performed in accordance with section 2.2.1 of appendix B to part 75 of this chapter, instead of performing the cylinder gas audits (CGAs) described in Procedure 1, section 5.1.2 of appendix F to this part. If this option is selected: The frequency of the linearity checks shall be as specified in section 2.2.1 of appendix B to part 75 of this chapter; the applicable linearity specifications in section 3.2 of appendix A to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.2.3 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.2.4 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the cylinder gas audits described in Procedure 1, section 5.1.2 of appendix F to this part shall be performed for $SO_2$and NO_Xspan values less than or equal to 30 ppm; and

(iii) For SO_2, CO_2, and O_2monitoring systems and for NO_Xemission rate monitoring systems, RATAs may be performed in accordance with section 2.3 of appendix B to part 75 of this chapter instead of following the procedures described in Procedure 1, section 5.1.1 of appendix F to this part. If this option is selected: The frequency of each RATA shall be as specified in section 2.3.1 of appendix B to part 75 of this chapter; the applicable relative accuracy specifications shown in Figure 2 in appendix B to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.3.2 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.3.3 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the relative accuracy specification in section 13.2 of Performance Specification 2 in appendix B to this part shall be met on a lb/MMBtu basis for SO_2(regardless of the SO_2emission level during the RATA), and for $NO_X$when the average NO_Xemission rate measured by the reference method during the RATA is less than 0.100 lb/MMBtu.

(f) The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under §60.45b(k) is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility subject to the opacity standard under §60.43b shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard under §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), or (5) of this section who elects not to use a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43b by April 29, 2011, within 45 days of stopping use of an existing COMS, or 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A–4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A–4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A–7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A–7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.,* 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.,* 90 seconds) or conduct a new Method 9 of appendix A–4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.46d(d)(7).

(ii) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S.

EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243–02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO_X standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system; or

(2) If the owner or operator has installed a NO_X emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

(c) The CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average NO_X emission rates measured by the continuous NO_X monitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for NO_X is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NO_X span values shall be determined as follows:

Fuel	**Span values for NO_X (ppm)**
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NO_Xspan values determined according to section 2.1.2 in appendix A to part 75 of this chapter.

(3) All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

(f) When NO_Xemission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, gasified coal, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NO_Xemission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in §60.41b, that is subject to the NO_Xstandards in §60.44b(a)(4), §60.44b(e), or §60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NO_Xemissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NO_Xemissions.

(j) The owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), (5), or (6) of this section is not required to install or operate a COMS if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO_2emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO_2or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under §60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO_2or PM emissions; or

(4) The affected facility does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section; or

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A) through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(C) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(5) The affected facility uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part; or

(6) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

(k) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.46b(j). The CEMS specified in paragraph §60.46b(j) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and

(4) Notification that an emerging technology will be used for controlling emissions of SO_2. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2, PM, and/or NO_Xemission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NO_Xstandard in §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. An affected facility burning coke oven gas alone or in combination with other gaseous fuels or distillate oil shall submit this plan to the Administrator for approval within 360 days of the initial startup of the affected facility or by November 30, 2009, whichever date comes later. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_Xemission rates (*i.e.* , ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.* , the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.* , flue gas O_2level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO_Xemission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(g).

(d) Except as provided in paragraph (d)(2) of this section, the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of this section.

(1) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(2) As an alternative to meeting the requirements of paragraph (d)(1) of this section, the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D4629 (incorporated by reference, see §60.17), or fuel suppliers. If residual oil blends are being

combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For an affected facility subject to the opacity standard in §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in §60.48b(a) shall maintain records according to the requirements specified in paragraphs (f)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO_Xstandards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO_Xemission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO_Xemission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_Xemission rates are in excess of the NO_Xemissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards in §60.43b(f) or to the operating parameter monitoring requirements in §60.13(i)(1).

(2) Any affected facility that is subject to the NO_Xstandard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, gasified coal, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NO_Xemissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_Xemission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NO_Xunder §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the SO_2standards under §60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period;

(2) Each 30-day average SO_2emission rate (ng/J or lb/MMBtu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken; For an exceedance due to maintenance of the SO_2control system covered in paragraph 60.45b(a), the report shall identify the days on which the maintenance was performed and a description of the maintenance;

(3) Each 30-day average percent reduction in SO_2emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which SO_2or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken;

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(6) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(7) Identification of times when hourly averages have been obtained based on manual sampling methods;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3;

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part; and

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of §60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average SO_2emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which $S0_2$or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and description of corrective action taken;

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(5) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(6) Identification of times when hourly averages have been obtained based on manual sampling methods;

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(8) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Procedure 1 of appendix F 1 of this part. If the owner or operator elects to implement the alternative data assessment procedures described in §§60.47b(e)(4)(i) through (e)(4)(iii), each data assessment report shall include a summary of the results of all of the RATAs, linearity checks, CGAs, and calibration error or drift assessments required by §§60.47b(e)(4)(i) through (e)(4)(iii).

(m) For each affected facility subject to the SO_2standards in §60.42(b) for which the minimum amount of data required in §60.47b(c) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates;

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19 of appendix A of this part, section 7;

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19 of appendix A of this part, section 7; and

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19 of appendix A of this part, section 7.

(n) If a percent removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) is used to determine the overall percent reduction (*i.e.* , $\%R_o$) under §60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit; and

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 of appendix A of this part and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in §60.44b(j), the results of any NO_Xemission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO_Xemission test.

(r) The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:

(1) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable

sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

(2) The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

(i) The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;

(ii) The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;

(iii) The ratio of different fuels in the mixture; and

(iv) The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

(s) Facility specific NO_Xstandard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) *Definitions* .

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 289 ng/J (0.67 lb/MMBtu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) *Emission monitoring* . (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(ii) The NO_Xemission limit shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b(i).

(iii) The monitoring of the NO_Xemission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) Facility-specific NO_Xstandard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions* .

Air ratio control damper is defined as the part of the low NO_Xburner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 473 ng/J (1.1 lb/MMBtu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides* . (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The NO_Xemission limit shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(iii) The monitoring of the NO_Xemission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(u) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia* . (1) This paragraph (u) applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”) and only to the natural gas-fired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of §§60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low NO_Xtechnology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NO_Xemissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a performance test to quantify criteria pollutant emissions.

(2) [Reserved]

(v) The owner or operator of an affected facility may submit electronic quarterly reports for $SO_2$and/or $NO_X$and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

(x) Facility-specific NO_Xstandard for Weyerhaeuser Company's No. 2 Power Boiler located in New Bern, North Carolina:

(1) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 215 ng/J (0.5 lb/MMBtu).

(2) *Emission monitoring for nitrogen oxides* . (i) The NO_Xemissions shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(ii) The monitoring of the NO_Xemissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the No. 2 Power Boiler shall submit a report on any excursions from the limits required by paragraph (x)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of the No. 2 Power Boiler shall keep records of the monitoring required by paragraph (x)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the No. 2 Power Boiler shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(y) Facility-specific NO_Xstandard for INEOS USA's AOGI located in Lima, Ohio:

(1) *Standard for* NO_X. (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct/waste are simultaneously combusted, the NO_Xemission limit is 645 ng/J (1.5 lb/MMBtu).

(2) *Emission monitoring for* NO_X. (i) The NO_Xemissions shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(ii) The monitoring of the NO_Xemissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the AOGI shall submit a report on any excursions from the limits required by paragraph (y)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the AOGI shall keep records of the monitoring required by paragraph (y)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the AOGI shall perform all the applicable reporting and recordkeeping requirements of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5089, Jan. 28, 2009]

Attachment F to a Part 70 Operating Permit

Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 63, Subpart YYYY] [326 IAC 21]

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NO_X) standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are subject to the PM and NO_Xstandards under this subpart and to the sulfur dioxide (SO_2) standards under subpart D (§60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NO_Xstandards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are also subject to the NO_Xstandards under this subpart and the PM and SO_2standards under subpart D (§60.42 and §60.43).

(c) Affected facilities that also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; §60.104) are subject to the PM and NO_Xstandards under this subpart and the SO_2standards under subpart J (§60.104).

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the $NO_X$and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under §60.281 is not considered a modification under §60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is subject to subpart Ea, subpart Eb, or subpart AAAA of this part is not covered by this subpart.

(i) Heat recovery steam generators that are associated with combined cycle gas turbines and that meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40).

(k) Any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO_2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, coke oven gas, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Cogeneration , also known as combined heat and power, means a facility that simultaneously produces both electric (or mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Gaseous fuel means any fuel that is a gas at ISO conditions. This includes, but is not limited to, natural gas and gasified coal (including coke oven gas).

Gross output means the gross useful work performed by the steam generated. For units generating only electricity, the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units, the gross useful work performed is the gross electrical or mechanical output plus 75 percent of the useful thermal output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output or to enhance the performance of the unit (*i.e.* , steam delivered to an industrial process).

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems. For gasified coal or oil that is desulfurized prior to combustion, the *Potential sulfur dioxide emission rate* is the theoretical SO_2emissions (ng/J or lb/MMBtu heat input) that would result from combusting fuel in a cleaned state without using any post combustion emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and not located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.30 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.50 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.42b Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction) and the emission limit determined according to the following formula:

$$E_s = \frac{(K_a H_a + K_b H_b)}{(H_a + H_b)}$$

Where:

E_s= SO_2emission limit, in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (or 1.2 lb/MMBtu);

K_b= 340 ng/J (or 0.80 lb/MMBtu);

H_a= Heat input from the combustion of coal, in J (MMBtu); and

H_b= Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) or 20 percent (0.20) of the potential SO_2emission rate (80 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable. For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(c) On and after the date on which the performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of SO_2emissions, shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 50 percent of the potential SO_2emission rate (50 percent reduction) and that contain SO_2in excess of the emission limit determined according to the following formula:

$$E_s = \frac{(K_c H_c + K_d H_d)}{(H_c + H_d)}$$

Where:

E_s= SO2 emission limit, in ng/J or lb/MM Btu heat input;

K_c= 260 ng/J (or 0.60 lb/MMBtu);

K_d= 170 ng/J (or 0.40 lb/MMBtu);

H_c= Heat input from the combustion of coal, in J (MMBtu); and

H_d= Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and listed in paragraphs (d)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/MMBtu) heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under paragraphs (d)(1), (2), (3) or (4) of this section. For facilities complying with paragraphs (d)(1), (2), or (3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from the exhaust gases entering the duct burner; or

(4) The affected facility burns coke oven gas alone or in combination with natural gas or very low sulfur distillate oil.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section and §60.45b(a), the SO_2emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential SO_2emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential SO_2emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO_2control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the SO_2control system is not being operated because of malfunction or maintenance of the SO_2control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in §60.45b(c) or §60.45b(d), and following the monitoring procedures as described in §60.47b(a) or §60.47b(b) to determine SO_2emission rate or fuel oil sulfur content; or (2) maintaining fuel records as described in §60.49b(r).

(k)(1) Except as provided in paragraphs (k)(2), (k)(3), and (k)(4) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20

lb/MMBtu) heat input or 8 percent (0.08) of the potential SO_2emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. For facilities complying with the percent reduction standard and paragraph (k)(3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in paragraph (k) of this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(2) Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other fuels with a potential SO_2emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO_2emissions limit in paragraph (k)(1) of this section.

(3) Units that are located in a noncontinental area and that combust coal, oil, or natural gas shall not discharge any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.50 lb/MMBtu) heat input if the affected facility combusts oil or natural gas.

(4) As an alternative to meeting the requirements under paragraph (k)(1) of this section, modified facilities that combust coal or a mixture of coal with other fuels shall not cause to be discharged into the atmosphere any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§ 60.43b Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 that combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input, (i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(4) An affected facility burning coke oven gas alone or in combination with other fuels not subject to a PM standard under §60.43b and not using a post-combustion technology (except a wet scrubber) for reducing PM or SO_2emissions is not subject to the PM limits under §60.43b(a).

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce SO_2emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if (i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood;

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood; and

(iii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input;

(i) If the affected facility combusts only municipal-type solid waste; or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less;

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less;

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for municipal-type solid waste, or municipal-type solid waste and other fuels; and

(iv) Construction of the affected facility commenced after June 19, 1984, but on or before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that can combust coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27

percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(g) The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.

(h)(1) Except as provided in paragraphs (h)(2), (h)(3), (h)(4), (h)(5), and (h)(6) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input,

(2) As an alternative to meeting the requirements of paragraph (h)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity of 73 MW (250 MMBtu/h) or less shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity greater than 73 MW (250 MMBtu/h) shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 37 ng/J (0.085 lb/MMBtu) heat input.

(5) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility not located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.30 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

(6) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.5 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2or PM emissions is not subject to the PM limits in (h)(1) of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.44b Standard for nitrogen oxides (NOX).

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X(expressed as NO_2) in excess of the following emission limits:

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(1) Natural gas and distillate oil, except (4):		
(i) Low heat release rate	43	0.10
(ii) High heat release rate	86	0.20
(2) Residual oil:		
(i) Low heat release rate	130	0.30
(ii) High heat release rate	170	0.40
(3) Coal:		
(i) Mass-feed stoker	210	0.50
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70
(iv) Lignite, except (v)	260	0.60
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340	0.80
(vi) Coal-derived synthetic fuels	210	0.50
(4) Duct burner used in a combined cycle system:		
(i) Natural gas and distillate oil	86	0.20
(ii) Residual oil	170	0.40

(b) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_Xin excess of a limit determined by the use of the following formula:

$$E_n = \frac{(EL_g H_g) + (EL_o H_o) + (EL_c H_c)}{(H_g + H_o + H_c)}$$

Where:

E_n= NO_Xemission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas or distillate oil, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(c) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain NO_Xin excess of the emission limit for the coal or oil, or mixtures of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_Xin excess of 130 ng/J (0.30 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere any gases that contain NO_Xin excess of the emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{ro}H_{ro}) + (EL_cH_c)}{(H_{go} + H_{ro} + H_c)}$$

Where:

E_n= NO_Xemission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil and/or byproduct/waste, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a NO_Xemission limit that shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as NO_Xemissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific NO_Xemission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, by conducting a 30-day performance test as provided in §60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The NO_Xemission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific NO_Xemission limit will be established at the NO_Xemission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing NO_Xemissions. In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_Xlimit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the NO_Xemission limit that applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on NO_Xemissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the NO_Xemission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the NO_Xemission limits of this section. The NO_Xemission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).) In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_Xlimit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(h) For purposes of paragraph (i) of this section, the NO_X standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NO_X emission limits under this section.

(l) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction or reconstruction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X (expressed as NO_2) in excess of the following limits:

(1) If the affected facility combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels: A limit of 86 ng/J (0.20 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas; or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

$$E_n = \frac{(0.10 \times H_{go}) + (0.20 \times H_r)}{(H_{go} + H_r)}$$

Where:

E_n = NO_X emission limit, (lb/MMBtu);

H_{go} = 30-day heat input from combustion of natural gas or distillate oil; and

H_r = 30-day heat input from combustion of any other fuel.

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this output-based limit must demonstrate compliance according to the procedures of §60.48Da(i) of subpart Da of this part, and must monitor emissions according to §60.49Da(c), (k), through (n) of subpart Da of this part.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2emission standards in §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels or distillate oil are allowed to exceed the limit 30 operating days per calendar year for SO_2control system maintenance.

(b) In conducting the performance tests required under §60.8, the owner or operator shall use the methods and procedures in appendix A (including fuel certification and sampling) of this part or the methods and procedures as specified in this section, except as provided in §60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential SO_2emission rate (% P_s) and the SO_2emission rate (E_s) pursuant to §60.42b following the procedures listed below, except as provided under paragraph (d) and (k) of this section.

(1) The initial performance test shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the SO_2standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal, only oil, or a mixture of coal and oil is combusted, the following procedures are used:

(i) The procedures in Method 19 of appendix A–7 of this part are used to determine the hourly SO_2emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS of §60.47b(a) or (b).

(ii) The percent of potential SO_2emission rate (%P_s) emitted to the atmosphere is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

%P_s= Potential SO_2emission rate, percent;

%R_g= SO_2removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

%R_f= SO_2removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly SO_2emission rate (E_{ho}^{o}) is used in Equation 19–19 of Method 19 of appendix A of this part to compute an adjusted 30-day average emission rate (E_{ao}^{o}). The Eho° is computed using the following formula:

$$E_{ho}^{o} = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

E_{ho}^{o} = Adjusted hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_{ho} = Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted; and

X_k = Fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(ii) To compute the percent of potential SO_2 emission rate ($\%P_s$), an adjusted $\%R_g$ ($\%R_g^{o}$) is computed from the adjusted E_{ao}^{o} from paragraph (b)(3)(i) of this section and an adjusted average SO_2 inlet rate (E_{ai}^{o}) using the following formula:

$$\%R_g^{o} = 100\left(1.0 - \frac{E_{ao}^{o}}{E_{ai}^{o}}\right)$$

To compute E_{ai}^{o}, an adjusted hourly SO_2 inlet rate (E_{hi}^{o}) is used. The E_{hi}^{o} is computed using the following formula:

$$E_{hi}^{o} = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi}^{o} = Adjusted hourly SO_2 inlet rate, ng/J (lb/MMBtu); and

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu).

(4) The owner or operator of an affected facility subject to paragraph (c)(3) of this section does not have to measure parameters E_w or X_k if the owner or operator elects to assume that X_k = 1.0. Owners or operators of affected facilities who assume X_k = 1.0 shall:

(i) Determine $\%P_s$ following the procedures in paragraph (c)(2) of this section; and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with SO_2 emission limits under §60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of §60.42b(d) does not have to measure parameters E_w or X_k in paragraph (c)(3) of this section if the owner or operator of the affected facility elects to measure SO_2 emission rates of the coal or oil following the fuel sampling and analysis procedures in Method 19 of appendix A–7 of this part.

(d) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility that combusts only very low sulfur oil, natural gas, or a mixture of these fuels, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a CEMS is used, or based on a daily average if Method 6B of appendix A of this part or fuel sampling and analysis procedures under Method 19 of appendix A of this part are used.

(e) The owner or operator of an affected facility subject to §60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under §60.8, compliance with the SO_2 emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO_2 for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under §60.8, compliance with the SO_2 emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO_2 for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for SO_2 are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under §60.46b are achieved. All valid emissions data, including valid SO_2 emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating $\%P_s$ and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the SO_2 control systems when oil is combusted as provided under §60.42b(i), emission data are not used to calculate $\%P_s$ or E_s under §60.42b(a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under §60.42b(i).

(j) The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO_2 standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).

(k) The owner or operator of an affected facility seeking to demonstrate compliance in §§60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

Link to an amendment published at 76 FR 3523, Jan. 20, 2011.

(a) The PM emission standards and opacity limits under §60.43b apply at all times except during periods of startup, shutdown, or malfunction. The NO_X emission standards under §60.44b apply at all times.

(b) Compliance with the PM emission standards under §60.43b shall be determined through performance testing as described in paragraph (d) of this section, except as provided in paragraph (i) of this section.

(c) Compliance with the NO_Xemission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the PM emission limits and opacity limits under §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods:

(1) Method 3A or 3B of appendix A–2 of this part is used for gas analysis when applying Method 5 of appendix A–3 of this part or Method 17 of appendix A–6 of this part.

(2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 of appendix A–6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A–3 of this part may be used in Method 17 of appendix A–6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A–6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160±14 °C (320±25 °F).

(5) For determination of PM emissions, the oxygen (O_2) or CO_2sample is obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using:

(i) The O_2or CO_2measurements and PM measurements obtained under this section;

(ii) The dry basis F factor; and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for NO_Xrequired under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_Xunder §60.48(b).

(1) For the initial compliance test, $NO_X$from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_Xemission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed in §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal (except as specified under §60.46b(e)(4)) or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NO_Xemission standards in §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated for each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NO_Xstandards under §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, gasified coal, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_Xstandards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_Xemissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_Xemission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_Xemission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility that combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in §60.49b(e), the requirements of §60.48b(g)(1) apply and the provisions of §60.48b(g)(2) are inapplicable.

(f) To determine compliance with the emissions limits for NO_Xrequired by §60.44b(a)(4) or §60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

(i) The emissions rate (E) of NO_Xshall be computed using Equation 1 in this section:

$$E = E_{sg} + \left(\frac{H_g}{H_b}\right)\left(E_{sg} - E_g\right) \qquad \text{(Eq.1)}$$

Where:

E = Emissions rate of $NO_X$from the duct burner, ng/J (lb/MMBtu) heat input;

E_{sg}= Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part;

H_g= Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);

H_b= Heat input rate to the duct burner, in J/hr (MMBtu/hr); and

E_g= Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part.

(ii) Method 7E of appendix A of this part shall be used to determine the NO_Xconcentrations. Method 3A or 3B of appendix A of this part shall be used to determine O_2concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring $NO_X$and $O_2$and meet the requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_Xemissions rate at the outlet from the steam generating unit shall constitute the NO_Xemissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method or the heat input method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in §60.44b(j) that has a heat input capacity greater than 73 MW (250 MMBtu/hr) shall:

(1) Conduct an initial performance test as required under §60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the NO_Xemission standards under §60.44b using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the NO_Xemission standards under §60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the PM limit in paragraphs §60.43b(a)(4) or §60.43b(h)(5) shall follow the applicable procedures in §60.49b(r).

(j) In place of PM testing with Method 5 or 5B of appendix A–3 of this part, or Method 17 of appendix A–6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall comply with the requirements specified in paragraphs (j)(1) through (j)(14) of this section.

(1) Notify the Administrator one month before starting use of the system.

(2) Notify the Administrator one month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the

Administrator of use of the CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (j) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraphs (j)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (j)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (j)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30-to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and

(ii) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in theFederal Register,whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and

(iii) For O_2(or CO_2), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours per 30-day rolling average.

(14) After July 1, 2011, within 90 days after completing a correlation testing run, the owner or operator of an affected facility shall either successfully enter the test data into EPA's WebFIRE data base located at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main* or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the SO_2standards in §60.42b shall install, calibrate, maintain, and operate CEMS for measuring SO_2concentrations and either O_2or CO_2concentrations and shall record the output of the systems. For units complying with the percent reduction standard, the $SO_2$and either O_2or CO_2concentrations shall both be monitored at the inlet and outlet of the SO_2control device. If the owner or operator has installed and certified $SO_2$and O_2or CO_2CEMS according to the requirements of §75.20(c)(1) of this chapter and appendix A to part 75 of this chapter, and is continuing to meet the ongoing quality assurance requirements of §75.21 of this chapter and appendix B to part 75 of this chapter, those CEMS may be used to meet the requirements of this section, provided that:

(1) When relative accuracy testing is conducted, SO_2concentration data and CO_2(or O_2) data are collected simultaneously; and

(2) In addition to meeting the applicable $SO_2$and CO_2(or O_2) relative accuracy specifications in Figure 2 of appendix B to part 75 of this chapter, the relative accuracy (RA) standard in section 13.2 of Performance Specification 2 in appendix B to this part is met when the RA is calculated on a lb/MMBtu basis; and

(3) The reporting requirements of §60.49b are met. $SO_2$and CO_2(or O_2) data used to meet the requirements of §60.49b shall not include substitute data values derived from the missing data procedures in subpart D of part 75 of this chapter, nor shall the SO_2data have been bias adjusted according to the procedures of part 75 of this chapter.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2input rate, or

(2) Measuring SO_2according to Method 6B of appendix A of this part at the inlet or outlet to the SO_2control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$and CO_2measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 or 3B of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily SO_2emission rate, E_D, shall be determined using the procedure described in Method 6A of appendix A of this part, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/MMBtu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/MMBtu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19 of appendix A of this part.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average SO_2emission rates measured by the CEMS required by paragraph (a) of this section and required under §60.13(h) is expressed in ng/J or lb/MMBtu heat input and is used to calculate the average emission rates under §60.42(b). Each 1-hour average SO_2emission rate must be based on 30 or more minutes of steam generating unit operation. The hourly averages shall be calculated according to §60.13(h)(2). Hourly SO_2emission

rates are not calculated if the affected facility is operated less than 30 minutes in a given clock hour and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) Except as provided for in paragraph (e)(4) of this section, all CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Except as provided for in paragraph (e)(4) of this section, quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the SO_2CEMS at the inlet to the SO_2control device is 125 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO_2control device is 50 percent of the maximum estimated hourly potential SO_2emissions of the fuel combusted. Alternatively, SO_2span values determined according to section 2.1.1 in appendix A to part 75 of this chapter may be used.

(4) As an alternative to meeting the requirements of requirements of paragraphs (e)(1) and (e)(2) of this section, the owner or operator may elect to implement the following alternative data accuracy assessment procedures:

(i) For all required $CO_2$and O_2monitors and for $SO_2$and NO_Xmonitors with span values greater than or equal to 100 ppm, the daily calibration error test and calibration adjustment procedures described in sections 2.1.1 and 2.1.3 of appendix B to part 75 of this chapter may be followed instead of the CD assessment procedures in Procedure 1, section 4.1 of appendix F to this part.

(ii) For all required $CO_2$and O_2monitors and for $SO_2$and NO_Xmonitors with span values greater than 30 ppm, quarterly linearity checks may be performed in accordance with section 2.2.1 of appendix B to part 75 of this chapter, instead of performing the cylinder gas audits (CGAs) described in Procedure 1, section 5.1.2 of appendix F to this part. If this option is selected: The frequency of the linearity checks shall be as specified in section 2.2.1 of appendix B to part 75 of this chapter; the applicable linearity specifications in section 3.2 of appendix A to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.2.3 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.2.4 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the cylinder gas audits described in Procedure 1, section 5.1.2 of appendix F to this part shall be performed for $SO_2$and NO_Xspan values less than or equal to 30 ppm; and

(iii) For SO_2, CO_2, and O_2monitoring systems and for NO_Xemission rate monitoring systems, RATAs may be performed in accordance with section 2.3 of appendix B to part 75 of this chapter instead of following the procedures described in Procedure 1, section 5.1.1 of appendix F to this part. If this option is selected: The frequency of each RATA shall be as specified in section 2.3.1 of appendix B to part 75 of this chapter; the applicable relative accuracy specifications shown in Figure 2 in appendix B to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.3.2 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.3.3 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the relative accuracy specification in section 13.2 of Performance Specification 2 in appendix B to this part shall be met on a lb/MMBtu basis for SO_2(regardless of the SO_2emission level during the RATA), and for $NO_X$when the average NO_Xemission rate measured by the reference method during the RATA is less than 0.100 lb/MMBtu.

(f) The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under §60.45b(k) is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility subject to the opacity standard under §60.43b shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard under §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), or (5) of this section who elects not to use a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43b by April 29, 2011, within 45 days of stopping use of an existing COMS, or 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A–4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A–4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A–7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A–7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.,* 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.,* 90 seconds) or conduct a new Method 9 of appendix A–4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.46d(d)(7).

(ii) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S.

EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243–02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO_Xstandard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring $NO_X$and O_2(or CO_2) emissions discharged to the atmosphere, and shall record the output of the system; or

(2) If the owner or operator has installed a NO_Xemission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

(c) The CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average NO_Xemission rates measured by the continuous NO_Xmonitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for $NO_X$is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NO_Xspan values shall be determined as follows:

Fuel	**Span values for NO_X (ppm)**
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NO_Xspan values determined according to section 2.1.2 in appendix A to part 75 of this chapter.

(3) All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

(f) When NO_Xemission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, gasified coal, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NO_Xemission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in §60.41b, that is subject to the NO_Xstandards in §60.44b(a)(4), §60.44b(e), or §60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NO_Xemissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NO_Xemissions.

(j) The owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), (5), or (6) of this section is not required to install or operate a COMS if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO_2emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO_2or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under §60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO_2or PM emissions; or

(4) The affected facility does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section; or

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A) through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(C) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(5) The affected facility uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part; or

(6) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

(k) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.46b(j). The CEMS specified in paragraph §60.46b(j) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011]

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and

(4) Notification that an emerging technology will be used for controlling emissions of SO_2. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2, PM, and/or NO_Xemission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NO_Xstandard in §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. An affected facility burning coke oven gas alone or in combination with other gaseous fuels or distillate oil shall submit this plan to the Administrator for approval within 360 days of the initial startup of the affected facility or by November 30, 2009, whichever date comes later. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_Xemission rates (*i.e.* , ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.* , the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.* , flue gas O_2level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO_Xemission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(g).

(d) Except as provided in paragraph (d)(2) of this section, the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of this section.

(1) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(2) As an alternative to meeting the requirements of paragraph (d)(1) of this section, the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D4629 (incorporated by reference, see §60.17), or fuel suppliers. If residual oil blends are being

combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For an affected facility subject to the opacity standard in §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in §60.48b(a) shall maintain records according to the requirements specified in paragraphs (f)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO_Xstandards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO_Xemission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO_Xemission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_Xemission rates are in excess of the NO_Xemissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards in §60.43b(f) or to the operating parameter monitoring requirements in §60.13(i)(1).

(2) Any affected facility that is subject to the NO_Xstandard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, gasified coal, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NO_Xemissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_Xemission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NO_Xunder §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the SO_2standards under §60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period;

(2) Each 30-day average SO_2emission rate (ng/J or lb/MMBtu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken; For an exceedance due to maintenance of the SO_2control system covered in paragraph 60.45b(a), the report shall identify the days on which the maintenance was performed and a description of the maintenance;

(3) Each 30-day average percent reduction in SO_2emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which SO_2or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken;

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(6) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(7) Identification of times when hourly averages have been obtained based on manual sampling methods;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3;

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part; and

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of §60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average SO_2emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which $S0_2$or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and description of corrective action taken;

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(5) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(6) Identification of times when hourly averages have been obtained based on manual sampling methods;

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(8) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Procedure 1 of appendix F 1 of this part. If the owner or operator elects to implement the alternative data assessment procedures described in §§60.47b(e)(4)(i) through (e)(4)(iii), each data assessment report shall include a summary of the results of all of the RATAs, linearity checks, CGAs, and calibration error or drift assessments required by §§60.47b(e)(4)(i) through (e)(4)(iii).

(m) For each affected facility subject to the SO_2standards in §60.42(b) for which the minimum amount of data required in §60.47b(c) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates;

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19 of appendix A of this part, section 7;

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19 of appendix A of this part, section 7; and

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19 of appendix A of this part, section 7.

(n) If a percent removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) is used to determine the overall percent reduction (*i.e.* , $\%R_o$) under §60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit; and

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 of appendix A of this part and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in §60.44b(j), the results of any NO_Xemission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO_Xemission test.

(r) The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:

(1) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable

sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

(2) The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

(i) The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;

(ii) The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;

(iii) The ratio of different fuels in the mixture; and

(iv) The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

(s) Facility specific NO_Xstandard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) *Definitions* .

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 289 ng/J (0.67 lb/MMBtu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) *Emission monitoring* . (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(ii) The NO_Xemission limit shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b(i).

(iii) The monitoring of the NO_Xemission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) Facility-specific NO_Xstandard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions* .

Air ratio control damper is defined as the part of the low NO_Xburner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 473 ng/J (1.1 lb/MMBtu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides* . (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The NO_Xemission limit shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(iii) The monitoring of the NO_Xemission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(u) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia* . (1) This paragraph (u) applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”) and only to the natural gas-fired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of §§60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low NO_Xtechnology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NO_Xemissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a performance test to quantify criteria pollutant emissions.

(2) [Reserved]

(v) The owner or operator of an affected facility may submit electronic quarterly reports for $SO_2$and/or $NO_X$and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

(x) Facility-specific NO_Xstandard for Weyerhaeuser Company's No. 2 Power Boiler located in New Bern, North Carolina:

(1) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_Xemission limit is 215 ng/J (0.5 lb/MMBtu).

(2) *Emission monitoring for nitrogen oxides* . (i) The NO_Xemissions shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(ii) The monitoring of the NO_Xemissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the No. 2 Power Boiler shall submit a report on any excursions from the limits required by paragraph (x)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of the No. 2 Power Boiler shall keep records of the monitoring required by paragraph (x)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the No. 2 Power Boiler shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(y) Facility-specific NO_Xstandard for INEOS USA's AOGI located in Lima, Ohio:

(1) *Standard for* NO_X. (i) When fossil fuel alone is combusted, the NO_Xemission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct/waste are simultaneously combusted, the NO_Xemission limit is 645 ng/J (1.5 lb/MMBtu).

(2) *Emission monitoring for* NO_X. (i) The NO_Xemissions shall be determined by the compliance and performance test methods and procedures for NO_Xin §60.46b.

(ii) The monitoring of the NO_Xemissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the AOGI shall submit a report on any excursions from the limits required by paragraph (y)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the AOGI shall keep records of the monitoring required by paragraph (y)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the AOGI shall perform all the applicable reporting and recordkeeping requirements of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5089, Jan. 28, 2009]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit (TITLE V)

Source Background and Description

Source Name:	**SABIC Innovative Plastics Mt. Vernon, LLC**
Source Location:	**1 Lexan Lane, Mt. Vernon, IN 47620**
County:	**Posey**
SIC Code:	**2821**
Operation Permit No.:	**T129-30384-00002**
Operation Permit Issuance Date:	**November 1, 2011**
Significant Source Modification No.:	**129-33998-00002**
Significant Permit Modification No.:	**129-34002-00002**
Permit Reviewer:	**Josiah Balogun**

On September 24, 2014, the Office of Air Quality (OAQ) had a notice published in The Mt Vernon Democrat in Mount Vernon, Indiana, stating that SABIC Innovative Plastics Mt. Vernon, LLC had applied for a Part 70 Operating Permit to continue to operate a stationary plastics manufacturing plant. The notice also stated that OAQ proposed to issue a Title V permit for this operation and provided information on how the public could review the proposed Title V permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Title V permit should be issued as proposed.

On October 9, 2014, Michael Gregory of SABIC Innovative Plastics Mt. Vernon, LLC, submitted comments on the proposed Title V Operating Permit. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflects the permit that was on public notice. Changes that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result, ensuring that these types of concerns are documented and part of the record regarding this permit decision.

The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Comment 1: To ensure emissions units naming are consistent throughout the permit, the following typographical errors are to be corrected throughout the permit.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:
****

A.3 Boilerhouse II [Section D]
A.3.1 Boilerhouse II, Building 2
<u>Boilerhouse II Affected Facilities/Sources</u>
****

(b) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER~~.~~

****

(2) .....

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW BOILER, R BOILER, H-390, H-109, **H-790,** H-900, H-900B, and H-520. For clarification purposes, R BOILER and BW BOILER are located in Boilerhouse I, Section K of this Part 70 permit; H-390**,** ~~and~~ H-109 **and H-790** are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

(b) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER~~.~~

****

(1).....

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW1-BOILER, BW2-BOILER, R BOILER, H-390, H-109, **H-790,** H-900, H-900B, and H-520. For clarification purposes, R BOILER is located in Boilerhouse I, Section K of this Part 70 permit; H-390**,** ~~and~~ H-109 **and H-790** are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

****

A.13 CPP Resin [Section N]

A.13.1 CPP Resin, Buildings 28, 34, and 60

<u>CPP Resin Affected Facilities/Sources</u>

****

(d) The CPP Resin area includes process heaters, identified as H-390 ~~and~~ H-109, **and H-790** which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-390**,** ~~and~~ H-109**, and H-790** (unit designed to burn gas 1 subcategory), are specified in Section D of this permit.

****

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-154	E-314*	V-310 STORAGE TANK (Note: V-310 is the C-310 distillation overheads receiver)	None	Condenser	N/A	Prior 1985
12-632A/B	E-313	CONDENSER E-313	None	E-313 is recovery device	N/A	1983
12-169	H-390	H-390 HOT OIL HEATER CAPABLE OF BURNING NATURAL GAS AND OFF GAS***	None	None	17.28 MMBtu/hr	1984
12-357	VLX CTC1	VALOX COOLING TOWER CELL 1	None	None	N/A	N/A
12-358	VLX CTC2	VALOX COOLING TOWER CELL 2	None	None	N/A	N/A

12-701	H-790	**22 MMBTU/hr natural gas-fired process heater, formerly 04-213 M-475 in BPA constructed in 1975**	None	None	22 MMBtu/hr	Relocated 2014

A.23 COGEN [Section W]

A.23.1 COGEN AUX BOILER

****

(b) This ~~permit~~ **section** includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section W.1 of this permit.

****

B.10 Preventive Maintenance Plan [326 IAC 2 7 5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) as described in 326 IAC 1 6 3 within ninety (90) days after the effective date of this permit for the emission units and air pollution control devices listed in the table below:

Permit Section	Stack vent ID	*Emission Unit/APCD*	Description
D.2	01-101	NE BOILER	Natural gas-fired boiler
**********	**********	**********	**********
W.2	19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine ~~with~~ **including** a **nominal 486** ~~560~~ MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).
Note: After shutdown of the BW-BOILER and E BOILER, rows that reference stack vent IDs 09-001 and 09-002 in Section K shall cease to apply.			

****

(b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by **326 IAC 2-7-1(35)**~~326 IAC 2-7-1(35)~~.

B.26 Applicable Requirements

Many provisions in Sections D - W of the permit contain references to a "permit condition" in Attachment A: Sections AA - UU and Attachments C-F, as well as a citation to a federal regulation in Title 40 of the Code of Federal Regulations. In each case, the applicable requirement is the federal regulation that is cited (version in effect as of the effective date of this permit, or as specifically updated in an amendment or renewal of this permit). The "permit conditions" in Attachment A: Sections AA - UU and Attachments C-F are not applicable requirements and are not enforceable; they are solely for informational purposes. The Permittee is not required to certify compliance with any provision in Attachment A: Sections AA - UU and Attachment~~s~~ C-F.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

****

(**c**~~d~~) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) **********

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

C.9 Performance Testing [326 IAC 3-6]

(a) **********

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~). The provision to submit a test protocol is not federally enforceable.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~). This condition is not federally enforceable.

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

****

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

****

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

****

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

****

(d) Unless otherwise specified in this permit, all reports required in Sections D - V of this permit shall be submitted within thirty (30) days of the end of the reporting period, and require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

Boilerhouse II Affected Facilities/Sources

****

(2) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.
The following emissions units constitute the existing affected source for the **"unit** designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW BOILER, R BOILER, H-390, H-109, **H-790,** H-900, H-900B, and H-520. For clarification purposes, R BOILER and BW BOILER are located in Boilerhouse I, Section K of this Part 70 permit; H-390**,** ~~and~~ H-109 **and H-790** are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

(b) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

****

(1) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.
The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW1-BOILER, BW2-BOILER, R BOILER, H-390, H-109, **H-790,** H-900, H-900B, and H-520. For clarification purposes, R BOILER is located in Boilerhouse I, Section K of this Part 70 permit; H-390 and H-109**, and H-790** are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

****

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

****

D.1.4 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD] [IC 13-14-2-6]

****

(1) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of E BOILER and BW-BOILER [RESERVED]

(2) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER

The table that follows sets forth provisions of 40 CFR 63, Subpart DDDDD standards that apply to the existing affected source for the "unit designed to burn gas 1 subcategory". The following units are part of this subcategory: NE

BOILER, BW GAS, and H BOILER; R BOILER, located in Boilerhouse I, Section K of this Part 70 permit; process heaters H-390**,** ~~and~~ H-109**, and H-790** in Section N; H-900 and H-900B in Section Q; and H-520 in Section E.

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	BW-BOILER	E BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	H-390	H-109	**H-790**	H-900	H-900B	H-520
63.7480	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7485	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7490(a)(1)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7490(d)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7495(b)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7495(d)						X	X	X	X	X	**X**	X	X	X
63.7499(a)	X	X												
63.7499(b)				X										
63.7499(l)			X		X	X	X	X	X	X	**X**	X	X	X
63.7500(a)(1)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7500(a)(2)	X	X		X										
63.7500(a)(3)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7500(b)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7500(e)			X	X	X	X	X	X	X	X	**X**	X	X	X
63.7500(f)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7501	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7501(b)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7505(a)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7510(e)			X		X	X	X	X	X	X	**X**	X	X	X
63.7510(j)										X				
63.7515(d)			X		X	X	X	X	X	X	**X**	X	X	X
63.7521					X				X					
63.7521(f-i)					X				X					
63.7530(d-e)			X	X	X	X	X	X	X	X	**X**	X	X	X
63.7530(f)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7530(g)					X				X					
63.7540(a)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7540(a)(2)(i)					X				X					
63.7540(a)(10)(i-v)			X		X	X	X	X	X	X	**X**	X	X	X
63.7540(a)(10)(vi)(A-C)			X		X	X	X	X	X	X	**X**	X	X	X
63.7540(a)(11)										X				
63.7540(a)(13)			X		X	X	X	X	X	X	**X**	X	X	X
63.7540(b)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7540(c)(1-4)					X				X					
63.7540(d)			X		X	X	X	X	X	X	**X**	X	X	X
63.7545(a)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(b)*	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(c)											**X**			
63.7545(e)(1)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(e)(2 and 4)					X				X					

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	BW-BOILER	E BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	H-390	H-109	**H-790**	H-900	H-900B	H-520
63.7545(e)(6-7)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(e)(8)(i-ii)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(f)(1-5)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(a)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(b)(1-4)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(c)(1)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(c)(2)					X				X					
63.7550(c)(5)(i-iv)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(c)(5)(xiv and xvii)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(h)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(h)(3)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7555(a)(1)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7555(a)(2)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7555(i and j)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7560(a-c)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7565	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7570(a)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7570(b)(1-5)	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7575	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X

* Initial notification for indicated emission units was submitted May 16, 2013.

(2) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

The table that follows sets forth provisions of 40 CFR 63, Subpart DDDDD that apply to the existing affected source and new affected source(s) for the "unit designed to burn gas 1 subcategory". The existing affected source is comprised of: BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, H BOILER; H-390**,** ~~and~~ H-109 **and H-790** located in Section N of this Part 70 permit; R BOILER in Section K; H-900 and H-900B in Section Q; H-520 in Section E; and, M-475, an existing process heater that is not in the current Part 70 permit. The new affected sources are: AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) located in Section W.

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	**H-790**	H-900	H-900B	H-520
63.7480	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7485	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7490	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7490(a)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7490(a)(1)	X	X	X	X	X	X				X	X	**X**	X	X	X
63.7490(a)(2)							X	X	X						

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	**H-790**	H-900	H-900B	H-520
63.7490(b)							X	X	X						
63.7490(d)	X	X		X	X	X				X	X	**X**	X	X	X
63.7495(a)			X				X	X	X						
63.7495(b)	X	X	X	X	X	X				X	X	**X**	X	X	X
63.7495(d)	X	X		X	X	X	X	X	X	X	X	**X**	X	X	X
63.7499(l)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7500(a)(1 and 3)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7500(b)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7500(e and f)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7501	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7505(a)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7510(e)	X	X	X	X	X	X				X	X	**X**	X	X	X
63.7510(g)			X				X	X	X						
63.7510(j)											X	**X**			
63.7515(d)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7521			X							X					
63.7521(f-i)			X							X					
63.7530(d and f)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7530(g)			X							X					
63.7540(a)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7540(a)(2)(i)			X							X					
63.7540(a)(10)(i-v)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7540(a)(10)(vi)(A-C)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7540(a)(11)			X								X	**X**			
63.7540(a)(13)	X	X		X	X	X	X	X	X	X	X	**X**	X	X	X
63.7540(b)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7540(c)(1-4)			X							X					
63.7540(d)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(a)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(b)**	X	X	X	X	X	X				X	X	**X**	X	X	X
63.7545(c)			X				X	X	X			**X**			
63.7545(e)(1)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(e)(2 and 4)			X							X					
63.7545(e)(6-7)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(e)(8)(i and ii)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(f)(1-5)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7545(h)(1-3)	X	X	X												
63.7550(a)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(b)(1-4)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(c)(1)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(c)(2)			X							X					

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	**H-790**	H-900	H-900B	H-520
63.7550(c)(5)(i - iv)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(c)(5)(xiv and xvii)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7550(h)(1)			X							X					
63.7550(h)(3)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7555(a)(1 - 2)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7555(i and j)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7560(a - c)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7565	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7570(a)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7570(b)(1 - 5)	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X
63.7575	X	X	X	X	X	X	X	X	X	X	X	**X**	X	X	X

* AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.
** Initial notification for indicated emission units was submitted May 16, 2013.

(b) Definitions, as set forth in 40 CFR 63.7575, are applicable to the requirements established pursuant to 40 CFR 63, Subpart DDDDD.

****

D.1.8 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5][IC 13-14-2-6]

Pursuant to the Commissioner's Order, dated January 10, 2014, the Permittee is required to submit to IDEM, OAQ an application within twelve (12) months of the date of the Order for a significant permit modification of this Part 70 permit pursuant to 326 IAC 2-7-12 to add the compliance schedule requirements of the Order in D.1.7(a). This requirement has been satisfied by the application for permit amendment, SPM 129-34002-00002**.**~~,~~

SECTION D.4 AFTER Coal Ceases to Be Transferred ~~to~~ at Boilerhouse II

EMISSIONS UNIT OPERATION CONDITIONS [RESERVED]

Section D consists of the following Sections: D.1, D.2, D.3, D.4, two (2) Part 70 Usage Reporting Forms, and two (2) Part 70 Quarterly Reporting Forms.
Condition D.4.4 concludes the Section D requirements of this permit
Reporting forms immediately follow.

E.10.8 National Emissions Standards for Hazardous Air Pollutants for Hazardous Waste Combustors-Notification Requirements [40 CFR 63, Subpart EEE]

****

(c) The Notification of Compliance, submitted pursuant to 40 CFR 63.1207(j) and 63.1210(d), requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

F.2.9 Record Keeping and Reporting Requirements

****

(b) A quarterly summary of the information to document the compliance status with Condition F.2.1 shall be submitted, using the reporting forms located at the end of this permit, or

their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~3~~4).

G.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit:

****

~~**All references to K.2 in G.2.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.**~~

G.3.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

****

~~**All references to K.2.1(a)(2) in G.3.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.**~~

H.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

****

~~All references to K.2.1(a)(2) in H.2.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.~~

I.2.3 BEFORE Shutdown of BW- BOILER and E BOILER - Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

****

(a) In order to comply with Condition I.2.1, at least one of the control devices used for organic sulfide control (COS Vent Oxidizer or COS Flare~~;~~ or E BOILER, BW-BOILER, or R BOILER**,** described in Section K) shall be in operation and control organic sulfide emissions from the COS stream at all times any of the carbon monoxide adsorbers are being regenerated.

****

(c) To determine compliance with Condition I.2.1(b) and whenever the COS stream is vented to at least two types of control devices permitted for use (the COS Oxidizer and COS Flare described in this section; or boilers as described in Section K) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the E BOILER equal:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the E BOILER) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal~~s~~:

****

I.2.3 AFTER Shutdown of BW-BOILER and E BOILER - Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

****

(c) To determine compliance with Condition I.2.1(b) and whenever the COS stream is vented to at least two types of control devices permitted for use (COS Oxidizer and COS Flare described in this section; or R BOILER described in Section K) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the R BOILER equal:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the R BOILER) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal~~s~~:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of COS Vent Oxidizer as determined in the most recent stack test)*

(C) Daily VOC emissions from the COS Flare equal~~s~~:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)*

****

J.1.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

****

~~All references to condition K.2.1(a)(2) in J.1.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.~~

AFTER Shutdown of BW-BOILER and E BOILER

L.2.6 Volatile Organic Compounds (VOC)[326 IAC 2-2]

****

(c) ~~The~~ SHEETFUMES TO shall operate at all times the coating process SHEETFUMES (C-41, C-42, S-4, and S-5) are directing VOC emissions to ~~the~~ SHEETFUMES TO while using VOC-based coatings.

****

AFTER Start-up of SHEETFUMES TO

~~D~~**L**.2.7.1 Testing Requirements [326 IAC 2-6.1-5(a)(2), (4)] [326 IAC 2-1.1-11]

****

L.2.16 Record Keeping Requirements

****

(d) To document the compliance status with Condition L.2.11(a), the Permittee shall maintain the weekly record of the visible emission notations required by Condition L.2.11(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of a visible emission notation (e.g~~,~~ the process did not operate during normal daylight hours or the unit did not operate during the week).

SECTION N.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Affected Facilities/Sources

****

(d) The CPP Resin area includes process heaters, identified as H-390**,** ~~and~~ H-109 **and H-790**, which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-390 ~~and~~ H-109**, and H-790** (unit designed to burn gas 1 subcategory), are specified in Section D of this permit.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

N.1.1 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD apply to H-390**,** ~~and~~ H-109 **and H-790** as specified in Section D.1 of this permit.

SECTION N.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Process Operations

(e) **********

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity [(c)]	Date of Construct
12-154	E-314*	V-310 STORAGE TANK (note: V-310 is the C-310 distillation overheads receiver)	None	Condenser	N/A	Prior 1985
*********	**********	**********	**********	**********	**********	**********
12-701	H-790	**22 MMBTU/hr natural gas-fired process heater, formerly 04-213 M-475 in BPA constructed in 1975**	None	None	22 MMBtu/hr	Relocated 2014
**********	**********	**********	**********	**********	**********	**********

Emission Limitations and Standards [326 IAC 2-7-5(1)]

N.2.8 Visible Emissions Notations

(a) Visible emission notations of ~~a~~ PTA US and PTA SILO emission point ~~baghouse stack exhaust~~ shall be performed once per week during normal daylight operations when loading. A trained employee shall record whether emissions are normal or abnormal.

N.2.9 Record Keeping and Reporting Requirements

****

(d) To document the compliance status with Condition N.2.8, the Permittee shall maintain a weekly record of visible emission notations. When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its records the reason for the lack of visible emission notation (e.g~~,~~ the process did not operate during normal daylight hours or the unit did not operate during the week.).

S.1.4 Reporting Requirements

A quarterly summary of monthly NOx emissions to document the compliance status with Condition S.1.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

V.1.13 National Emissions Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing - Notification Requirements [40 CFR 63, Subpart FFFF] [326 IAC 20]

****

(d) The notifications required by paragraphs (b) and (c) shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notifications required by paragraphs (b) and (c) require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

W.1.15 Greenhouse Gases (GHGs) Calculations

To determine the compliance status with Condition W.1.4, the following equation shall be used to determine the CO2e emissions from the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected):

CO2e emissions (tons/month**,** per boiler) = [(Fuel Usage x Heat Content) x (CO2 EF (lb/MMBtu) x CO2 GWP + CH4 EF x CH4 GWP + N2O EF x N2O GWP)] x 1 ton/2000 lb

W.2.4 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to PSD 326 IAC 2-2-3 (Prevention of Significant Deterioration) for the pollutant GHGs, the best available control technology (BACT) for the COGEN shall be as follows:

(a) ~~The~~ COGEN ~~system~~ shall use natural gas only.

(b) ~~The~~ COGEN ~~system~~ shall achieve a minimum net plant efficiency of 85% (LHV); and

(c) The total CO2e emissions from COGEN ~~system~~ shall be limited to 937,379 tons of CO2e per twelve (12) consecutive month period with compliance determined on a monthly basis.

W.2.19 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]**[40 CFR 64]**

****

Response 1: All the above typographical errors and corrections have been corrected throughout the permit accordingly.

Technical Support Document (TSD) Comments

Comment 2: Few typos in the technical Support Document.

Scenario 3: AOS 2-Install CG1/AUX2 BOILER and shut down BW1/BW2 BOILERs*

	Potential to Emit AOS 2-Install CG1/AUX2 BOILER and shut down BW1/BW2 BOILERs (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**GHGs**
COGEN	56	56	56	5.13	20.1	119	786	negl	937,379
AUX BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
CG1 BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
AUX2 BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
SHEETFUMES TO	0.32	0.32	0.32	0.03	5.7	3.6	2.13	2.1E-05	5,113
Increase in Emissions	**89**	**89**	**89**	**7.3**	**32.3**	**244**	**1,252**	**1.6E-03**	**1,343,057**
Significant Level	**25**	**15**	**10**	**40**	**40**	**100**	**40**	**0.6**	**75,000 CO_2e**

*** The potential to emit for BW1-BOILER and BW2-BOILER are zero under Scenario 3 (AOS 2) because these emissions units will be permanently shutdown.**

TOTAL ACTUAL EMISSIONS FOR AFFECTED UNITS BY YEAR for Boilers

	2005 and 2006 Baseline Actual Emission for Boilers (tons/year)											
Year	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**CO2**	**CH4**	**N2O**	**GHGs**
2005-	**530**	**376**	**243**	**6,133**	**7.66**	**279**	**2,047**	**7.8E-04**	**668,127**	**5.87**	**4.31**	**669,558**
2006	**517**	**373**	**249**	**6,192**	**7.26**	**260**	**2,035**	**7.4E-04**	**649,881**	**5.61**	**4.10**	**651,243**
Average Actual Emissions for the Affected Units	**524**	**375**	**246**	**6163**	**7.46**	**269**	**2041**	**7.6E-04**	**659,004**	**5.74**	**4.20**	**660,400**

Scenario 1: No AOS
Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions Net Emissions

	Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions (Tons per year)					
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NO_X**	**GHGs**
COGEN Project Emissions Unit PTE	83	83	83	341	1,239	1,331,649
COGEN Project Baseline Actual Emissions (Shutdown of three boilers and conversion of BW1/2 to natural gas-fired)	**-524**	**-375**	**-246**	**-269**	**-2,106**	**-659,004**
COGEN Project Projected Actual Emissions Increase	**-441**	**-292**	**-163**	**72**	**-876**	**672,645**
S 16 Sheet Line	3.78	0.29	0.29	--	--	--
Silo 75	1.97	1.97	1.97	--	--	--
Project Delta	1.98	1.98	1.98	8.21	4.89	1,197
Contemporaneous Emission Increase **Total (S16, Silo 75, Project Delta)**	**7.73** ~~90.7~~	**4.24** ~~87~~	**4.24** ~~87~~	**8.21** ~~349~~	**4.89** ~~1244~~	**1,197** ~~1,332,846~~
Contemporaneous Emission Decrease ~~(Shutdown of three boilers and conversion of BW1 and BW2 to natural gas fired)~~	**0** ~~-524~~	**0** ~~-375~~	**0** ~~-246~~	**0** ~~-269~~	**0** ~~-2016~~	**0** ~~-659,004~~
Net Emission Increase	**-433**	**-288**	**-159**	**80**	**-872**	**673,842**
PSD Significant Level	25	15	10	100	40	75,000 CO_2e

The GHG emissions from this modification are equal to or greater than seventy-five thousand (75,000) tons of CO2 equivalent (CO2e) emissions per year. Therefore, pursuant to 326 IAC 2-2, the GHG emissions are subject to regulation and the PSD requirements do apply to the GHG emissions.

Scenario 2: AOS 1-COGEN Controlled with CO CAT and SCR

Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions Net Emissions

	Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions (Tons per year)					
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NO_X**	**GHGs**
COGEN Project ~~Contemporaneous Emission Increase~~ **Emissions Unit PTE**	127	127	127	341	511	1,331,649
COGEN Project Baseline Actual Emissions (Shutdown of three boilers and conversion of BW1/2 to natural gas-fired)	**-524**	**-375**	**-246**	**-269**	**-2,106**	**-659,004**
COGEN Project Projected Actual Emissions Increase	**-397**	**-248**	**-119**	**72**	**-1,595**	**672,645**
S 16 Sheet Line	3.78	0.29	0.29	--	--	--
Silo 75	1.97	1.97	1.97	--	--	--
Project Delta	1.98	1.98	1.98	8.21	4.89	1,197
Contemporaneous Emission Increase **Total (S16, Silo 75, Project Delta)**	~~135~~ **7.73**	~~131~~ **4.24**	~~131~~ **4.24**	~~349~~ **8.21**	~~516~~ **4.89**	~~1,332,846~~ **1,197**
Contemporaneous Emission Decrease ~~(Shutdown of three boilers and conversion of BW1 and BW2 to natural gas fired)~~	**0** ~~-524~~	**0** ~~-375~~	**0** ~~-246~~	**0** ~~-269~~	**0** ~~-2016~~	**0** ~~-659,004~~
Net Emission Increase	**-389**	**-244**	**-115**	**80**	**-1,590**	**673,842**
PSD Significant Level	25	15	10	100	40	75,000 CO_2e

The GHG emissions from this modification are equal to or greater than seventy-five thousand (75,000) tons of CO2 equivalent (CO2e) emissions per year. Therefore, pursuant to 326 IAC 2-2, the GHG emissions are subject to regulation and the PSD requirements do apply to the GHG emissions.

Scenario 3: AOS 2-Install CG1/AUX2 BOILER and shut down BW1/BW2 BOILERs

Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions

	Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions (Tons per year)					
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NO_X**	**GHGs**
COGEN Project Contemporaneous Emission Increase	89	89	89	244	1,252	1,343,057
COGEN Project Baseline Actual Emissions (Shutdown of five boilers)	**-524**	**-375**	**-246**	**-269**	**-2,106**	**-659,004**
COGEN Project Projected Actual Emissions Increase	**-435**	**-286**	**-157**	**-25**	**-854**	**684,053**
S 16 Sheet Line	3.78	0.29	0.29	--	--	--
Silo 75	1.97	1.97	1.97	--	--	--
Project Delta	1.98	1.98	1.98	8.21	4.89	1,197
Contemporaneous Emission Increase **Total (S16, Silo 75, Project Delta)**	~~97~~ **7.73**	~~91~~ **4.24**	~~91~~ **4.24**	~~252~~ **8.21**	~~1257~~ **4.89**	~~1,344,254~~ **1,197**
Contemporaneous Emission Decrease ~~(Shutdown of four boilers and conversion of BW1 and BW2 to natural gas fired)~~	**0** ~~-524~~	**0** ~~-375~~	**0** ~~-246~~	**0** ~~-269~~	**0** ~~-2106~~	**0** ~~-659,004~~
Net Emission Increase	**-427**	**-282~~4~~**	**-153~~5~~**	**-17**	**-849**	**685,250**
PSD Significant Level	25	15	10	100	40	75,000 CO_2e

The GHG emissions from this modification are equal to or greater than seventy-five thousand (75,000) tons of CO2 equivalent (CO2e) emissions per year. Therefore, pursuant to 326 IAC 2-2, the GHG emissions are subject to regulation and the PSD requirements do apply to the GHG emissions.

Federal Rule Applicability Determination

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
COGEN (CO)	Y	Y	> 100	~~<~~ **>**100	100	Y	~~N~~ **Y**
COGEN (VOC)	Y	Y	> 100	< 100	100	Y	N
COGEN (NOx)	Y*****	N	> 100	< 100	100	N	N
SHEETFUMES **(VOC)**	Y	Y	> 100	< 100	100	Y	N

*** When AOS1 is elected COGEN NOx emissions will be controlled with a SCR. No emissions limit will be applicable to COGEN NOx emissions with or without a SCR; therefore, CAM is not applicable.**

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to COGEN for VOC and CO upon start-up. **SHEETFUMES for VOC is currently subject to CAM and will be subject to CAM when SHEETFUMES TO is operated.** A CAM plan has been incorporated into the permit modification.

The PTE of **the ten pollutant-specific** emissions **units (COGEN: PM, PM10, PM2.5, and SO2; and SHEETFUMES-PM, PM10, PM2.5, CO, NOx, and SO2)** ~~from these emission units~~ are less than the threshold of 100 tons per year and the**se pollutant-specific** emission**s** units have ~~no~~ **neither** control devices ~~or~~ **nor** limitations. **In addition, the pollutant-specific emissions units associated with AUX BOILER (and AUX2 BOILER and CG1 BOILER, when installed) are not subject to CAM as the PTE for all pollutants are less than the threshold of 100 tons per year.** Therefore, ~~Based~~ **based** on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the**se** new units ~~for PM, PM10, PM2.5 and SO2 as part of this modification~~.

(h) **40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters:**

****

Boiler MACT Applicability Summary **AFTER** COGEN Project Is Complete

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490
(4) 40 CFR 63.7490(a)
(5) 40 CFR 63.7490(a)**,** (2)
(6) 40 CFR 63.7490(b)
(7) 40 CFR 63.7495(a)
(8) 40 CFR 63.7495(d)
(9) 40 CFR 63.7499(l)

(10) 40 CFR 63.7500(a), (1 and 3)
(11) 40 CFR 63.7500(b)
(12) 40 CFR 63.7500(e and f)
(13) 40 CFR 63.7501
(14) 40 CFR 63.7505(a)
(16) 40 CFR 63.7510(g)
(16) 40 CFR 63.7515(d)
(17) 40 CFR 63.7530(d and f)
(18) 40 CFR 63.7540(a)
(19) 40 CFR 63.7540(a), (10)(i-v)
(20) 40 CFR 63.7540(a), (10)(vi)(A-C)
(21) 40 CFR 63.7540(a), (13)
(22) 40 CFR 63.7540(b)
(23) 40 CFR 63.7540(d)
(24) 40 CFR 63.7545(a)
(25) 40 CFR 63.7545(c)
(26) 40 CFR 63.7545(e), (1)
(27) 40 CFR 63.7545(e), (6-7)
(28) 40 CFR 63.7545(e), (8)(i-ii)
(29) 40 CFR 63.7545(f), (1-5)
(30) 40 CFR 63.7545(h), (1-3)
(31) 40 CFR 63.7550(a)
(32) 40 CFR 63.7550(b), (1-4)
(33) 40 CFR 63.7550(c), (1)
(34) 40 CFR 63.7550(c), (5)(i-iv)
(35) 40 CFR 63.7550(c), (5)(xiv and xvii)
(36) 40 CFR 63.7550(h), (3)
(37) 40 CFR 63.7555(a), (1-2)
(38) 40 CFR 63.7555(i and j)
(39) 40 CFR 63.7560(a-c)
(40) 40 CFR 63.7565
(41) 40 CFR 63.7570(a)
(42) 40 CFR 63.7570(b), (1-5)
(43) 40 CFR 63.7575

326 IAC 2-2 (Prevention of Significant Deterioration)
This source was constructed before August 1977, the applicability date for this rule and is one of the 28 listed source categories and has potential to emit of at least one regulated pollutant greater than 100 tons per year before August 7, 1977. This source was a major source pursuant to 326 IAC 2-2 (PSD), prior to August 7, 1977. The CO and VOC emissions are limited so that the netting result is less than the significant levels. The CO and VOC emission limits are as follows;

(a) The total CO emissions from the COGEN Project (COGEN Project consists of BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO, COGEN, and AUX BOILER) shall be limited to less than 360 tons CO per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit will ensure~~s~~ that the net emission increase of CO from the COGEN Project is limited below 100 tons per year and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable to 2014 modification (**the COGEN Project)**.

Response 2: No changes shall be made to the Technical Support Document (TSD) because the OAQ prefers that the TSD reflects the permit that was public noticed. This ATSD becomes the revised portion of the TSD.

The comments on Scenario 1: No AOS Table, Scenario 2: AOS 1-COGEN controlled with CO CAT and SCR Table, and Scenario 3: AOS 2-Intall CG1/AUX2 BOILER and Shut down BW1/BW2 BOILERs Table will not be revised because the project went through netting analysis and not ATPA calculation. Net Project increase cannot be determined from the ATPA Analysis**.** Therefore, there is no change to these tables.

Appendix B – BACT Analysis Comments

Comment 3: Few typos in the BACT Analysis.

GHGs BACT – Natural Gas-Fired Auxiliary Boiler (AUX BOILER)

Steam Line Maintenance
****
The source**'s** standard design practice is to insulate all piping (including steam lines) that exceed 140°F. Insulating jackets are available for valves, traps, flanges and other fittings. Leaky steam traps should be fixed as they represent another potentially significant source of wasted energy. Energy efficiency gains and cost depend on length and type of insulation required.

GHGs BACT – Natural Gas-Fired Auxiliary Boiler (AUX2 BOILER)

Steam Line Maintenance
****
The source**'s** standard design practice is to insulate all piping (including steam lines) that exceed 140°F. Insulating jackets are available for valves, traps, flanges and other fittings. Leaky steam traps should be fixed as they represent another potentially significant source of wasted energy. Energy efficiency gains and cost depend on length and type of insulation required.

GHGs BACT – Natural Gas-Fired Boiler (CG1 BOILER)

Steam Line Maintenance
****
The source**'s** standard design practice is to insulate all piping (including steam lines) that exceed 140°F. Insulating jackets are available for valves, traps, flanges and other fittings. Leaky steam traps should be fixed as they represent another potentially significant source of wasted energy. Energy efficiency gains and cost depend on length and type of insulation required.

Response 3: No changes shall be made to the BACT analysis Technical Support Document (TSD) because the OAQ prefers that the TSD reflects the permit that was public noticed. IDEM has corrected the few typos in the BACT Analysis TSD.

Other Changes

Upon further review IDEM, OAQ has made the following changes to the Title V permit T129-30384-00002. (deleted language appears as ~~strikout~~ and the new language **bolded**):

Change 1: IDEM has changed the name of the contact person from Vincent Pinnick to Michael Gregory in the modification letter.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source and Permit Modification

Source Description and Location

Source Name:	**SABIC Innovative Plastics Mt. Vernon, LLC**
Source Location:	**1 Lexan Lane, Mt. Vernon, IN 47620**
County:	**Posey**
SIC Code:	**2821**
Operation Permit No.:	**T129-30384-00002**
Operation Permit Issuance Date:	**November 1, 2011**
Significant Source Modification No.:	**129-33998-00002**
Significant Permit Modification No.:	**129-34002-00002**
Permit Reviewer:	**Josiah Balogun**

Existing Approvals

The source was issued Part 70 Operating Permit No. T129-30384-00002 on November 1, 2011. The source has since received the following approvals:

(a) Administrative Amendment No. T129-31264-00002, issued on December 19, 2011;

(b) Administrative Amendment No. T129-33167-00002, issued on May 28, 2013;

(c) Administrative Amendment No. T129-33362-00002, issued on July 11, 2013; and

(d) Minor Source Modification No. 129-34381-00002, issued on May 9, 2014.

County Attainment Status

The source is located in Posey County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Posey County has

been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Posey County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Posey County has been classified as attainment or unclassifiable in Indiana for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a plastic industry, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	**Emissions** (ton/yr)
PM	> 100
PM_{10}	> 100
$PM_{2.5}$	> 100
SO_2	> 100
VOC	> 100
CO	> 100
NO_X	> 100
GHGs as CO_2e	> 100,000
HAPs	
Single HAP	> 10
Total HAPs	> 25

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) The source-wide GHG emissions are equal to or greater than one hundred thousand (>100,000) tons of CO_2 equivalent (CO2e) emissions per year. GHG emissions do not affect the source PSD status.

(c) These emissions are based upon Permit Renewal no. 129-30384-00002, issued on November 1, 2011.

(d) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by SABIC Innovative Plastic Mt. Vernon, LLC on December 17, 2013, relating to the construction of a new COGEN project, which consists of; installing a stationary gas combustion turbine with duct firing and heat recovery steam generator (HRSG), emissions unit ID is COGEN; installing an auxiliary natural gas-fired boiler (AUX BOILER); converting existing BW1-BOILER and BW2-BOILER coal-fired boilers to natural gas-fired only; and modifying the flow of process fumes from the existing SHEETFUMES operations to route them to a new thermal oxidizer (SHEETFUMES TO). The COGEN Project also included shutting down all boilers (i.e., E BOILER, L BOILER, BW-BOILER, and R BOILER) in Boilerhouse I.

As the detailed design and engineering of the COGEN project advances, additional information regarding the project scope was submitted on August 20, 2014. Although the configuration of the COGEN project has not changed, it has more than one installation scenario, presented as alternative operating scenarios (AOS).

Below is a summary of the three operating scenarios for the COGEN Project:

The COGEN project scope remains the same with the exception that the Riley boiler (R BOILER) will not be shut down; R BOILER will be operated in accordance with current permit requirements. This project scope is referred to as COGEN No AOS throughout the additional information submittal.

COGEN No AOS Description:

Install a new natural gas-fired stationary combustion turbine with duct firing and HRSG (COGEN) controlled with CO catalyst;
Install an auxiliary boiler (AUX BOILER);
Convert BW1-BOILER and BW2-BOILER to natural gas-fired only; and
Continue to route SHEETFUMES to R BOILER or to the new thermal oxidizer (SHEETFUMES TO).
The COGEN project, No AOS, will permanently shut down BW-BOILER, E BOILER, and L BOILER in Boilerhouse I. R BOILER in Boilerhouse I will remain in operation.

COGEN AOS 1 Description:

The source is permitting alternative operating scenarios (AOS) to install SCR as a control device on COGEN, referred to as COGEN AOS 1.

Install a new natural gas-fired stationary combustion turbine with duct firing and HRSG (COGEN) controlled with CO catalyst and SCR;
Install an auxiliary boiler (AUX BOILER);
Convert BW1-BOILER and BW2-BOILER to natural gas-fired only; and
Continue to route SHEETFUMES to R BOILER or to the new thermal oxidizer (SHEETFUMES TO).
The COGEN project, AOS 1, will permanently shut down BW-BOILER, E BOILER, and L BOILER in Boilerhouse I. R BOILER in Boilerhouse I will remain in operation.

COGEN AOS 2 Description:

A second AOS, addressed in the August 20, 2014, additional information is referred to as COGEN AOS 2.

Install a new natural gas-fired stationary combustion turbine with duct firing and HRSG controlled with CO catalyst (COGEN);
Install an auxiliary boiler (AUX BOILER); and two natural gas-fired package boilers (CG1 BOILER and AUX2 BOILER);
Continue to route SHEETFUMES to R BOILER or to the new thermal oxidizer (SHEETFUMES TO).

The COGEN project AOS 2 will permanently shut down: BW-BOILER, E BOILER, and L BOILER in Boilerhouse I; and BW1-BOILER and BW2-BOILER in Boilerhouse II. R BOILER in Boilerhouse I will remain in operation.

The following list of the proposed and modified emission unit(s) and pollution control device(s):

(a) The natural gas-fired AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) as identified below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER(and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in the permit.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to an affected source, as defined pursuant to the NESHAP. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is a new affected source subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section D.1 of this permit.

Significant Activities

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices	Maximum Capacity	Date of Construct
19-002	AUX BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-004	AUX 2 BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-005	CG1 BOILER	Natural gas-fired boiler with low-NOx burner	None	None	249 MMBtu/hr	NA

COGEN

(a) The natural gas-fired COGEN emission unit is located in the COGEN Area as identified below. COGEN consists of a natural gas-fired stationary combustion turbine and a heat recovery steam generator (HRSG) with duct burner. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to the affected facility. COGEN is an affected facility pursuant to 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. The requirements of 40 CFR 60, Subpart KKKK, that are applicable to COGEN (including the HRSG with Duct Burner), are specified in this section of the permit. Because the requirements of 40 CFR 60, Subpart KKKK, apply to COGEN

(including the HRSG with Duct Burner), the requirements of 40 CFR 60, Subpart Db, are not applicable to the Duct Burner.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the affected source. COGEN is an affected source pursuant to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The requirements of 40 CFR 63, Subpart YYYY, that are applicable to COGEN are specified in this section of the permit. Pursuant to 40 CFR 63.6095(d), Stay of standards for gas-fired subcategories, the COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

(d) Pursuant to the definitions contained in 40 CFR 63.7575, waste heat boilers are excluded from the definition of "boiler". Waste heat boilers are defined to include duct burners; therefore, the HRSG, a waste heat boiler with duct burner, is not considered an affected source pursuant to 40 CFR 63, Subpart DDDDD.

(e) Pursuant to 40 CFR 63.6092, the HRSG with duct burner is not considered an affected source pursuant to 40 CFR 63, Subpart YYYY.

Significant Activities

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices	Maximum Capacity	Date of Construct
19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).	Oxidation Catalyst	None	1,812 MMBtu/hr	NA

Additional New/Modified Emissions Units:

1. Thermal oxidizer, to control the existing SHEETFUMES emission units.

2. Conversion of BW1-BOILER and BW2-BOILER to burn only natural gas.

Table 2-1: Summary of COGEN Project Emission Units

Location	Emission Unit	COGEN Project Modifications
Boilerhouse I	09-100 BW BOILER	Permanently shut down
	09-002 E BOILER	Permanently shut down
	09-002 L BOILER	Permanently shut down
Boilerhouse II (to remain operating with natural gas-fired units only)	01-001 BW1-BOILER	Convert to burn natural gas only
	01-001 BW2-BOILER	Convert to burn natural gas only
COGEN Plant (new stationary gas combustion turbine with duct firing and CO oxidation catalyst and optional SCR)	19-001 COGEN	New emission unit installation
	19-002 AUX BOILER	New emission unit installation
	19-004 AUX2 BOILER	New emission unit installation, if W.1.19 is elected
	19-005 CG1 BOILER	New emission unit installation, if W.1.19 is elected
	19-003 COGEN SCR	New alternate control device

		installation
Structured Products (existing emissions units unchanged; adding new, more efficient controls)	09-600 SHEETFUMES TO	New control device installation

Enforcement Issues

There are no pending enforcement actions.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	**Potential To Emit, No AOS** (ton/yr)	**Potential To Emit, for AOS 1-COGEN controlled with CO CAT and SCR** (ton/yr)	**Potential To Emit, for AOS 2-Install CG1/AUX2 BOILER and Shut Down BW1/2 BOILERs** (ton/yr)
PM	83.3	127	89
PM_{10}	83.3	127	89
$PM_{2.5}$	83.3	127	89
SO_2	7.1	7.1	7.1
VOC	617	617	610
CO	714	714	617
NO_X	1,239	1,239	1,252
Pb	1.63E-03	1.63E-03	1.63E-03
CO2e	1,331,649	1,331,649	1,343,057

This source modification is subject to 326 IAC 2-7-10.5(g)(1), because the emissions of PM, PM10, PM2.5, VOC, CO and NOx are greater than 25 tons per year, each and this modification is a PSD modification because the CO2e emission is greater than 75,000 tons per year. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because the modification requires a case-by-case determination of an emission limitation to the existing Part 70 Operating Permit.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Scenario 1: No AOS

	Potential to Emit, No AOS (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**GHGs**
COGEN	56	56	56	5.13	20.1	119	786	negl	937,379
AUX BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
BW1 & BW2 Natural Gas Boiler	16.1	16.1	16.1	1.3	11.6	178	296	1.1E-03	255,635
SHEETFUMES TO	0.32	0.32	0.32	0.03	5.7	3.6	2.13	2.1E-05	5,113
Increase in Emissions	**83**	**83**	**83**	**7.1**	**39.6**	**341**	**1,239**	**1.6E-03**	**1,331,649**
Significant Level	**25**	**15**	**10**	**40**	**40**	**100**	**40**	**0.6**	**75,000 CO_2e**

Scenario 2: AOS 1-COGEN Controlled with CO CAT and SCR

	Potential to Emit for AOS 1-COGEN Controlled with CO CAT and SCR (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**GHGs**
COGEN	99.5	99.5	99.5	5.13	20.1	119	57.5	negl	937,379
AUX BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
BW1 & BW2 Boiler	16.1	16.1	16.1	1.3	11.6	178	296	1.1E-03	255,635
SHEETFUMES TO	0.32	0.32	0.32	0.03	5.7	3.6	2.13	2.1E-05	5,113
Increase in Emissions	**127**	**127**	**127**	**7.1**	**39.6**	**341**	**511**	**1.6E-03**	**1,331,649**
Significant Level	**25**	**15**	**10**	**40**	**40**	**100**	**40**	**0.6**	**75,000 CO_2e**

Scenario 3: AOS 2-Install CG1/AUX2 BOILER and shut down BW1/BW2 BOILERs

	Potential to Emit AOS 2-Install CG1/AUX2 BOILER and shut down BW1/BW2 BOILERs (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**GHGs**
COGEN	56	56	56	5.13	20.1	119	786	negl	937,379
AUX BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
CG1 BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
AUX2 BOILER	10.9	10.9	10.9	0.7	2.2	40.4	155	5.5E-04	133,521
SHEETFUMES TO	0.32	0.32	0.32	0.03	5.7	3.6	2.13	2.1E-05	5,113
Increase in Emissions	**89**	**89**	**89**	**7.3**	**32.3**	**244**	**1,252**	**1.6E-03**	**1,343,057**
Significant Level	**25**	**15**	**10**	**40**	**40**	**100**	**40**	**0.6**	**75,000 CO_2e**

The uncontrolled VOC emissions increases from the project are greater than significant levels but the source has elected to limit the VOC emissions below 40 tons per year for the proposed modification.

The uncontrolled CO emissions increases from the project are greater than 100 tons per year therefore, netting is triggered for CO emissions but the CO emissions after the netting analysis are less than 100 tons per year, therefore PSD requirements do not apply to the CO emissions.

The uncontrolled SO_2 emissions are less than 40 tons per year. Therefore, netting was not triggered for this pollutant.

Since PM, PM10, $PM_{2.5}$, NOx and CO2e are emitted at significant levels from the proposed modification, therefore, netting is triggered for these pollutants. A summary of contemporaneous emissions increases and decreases for the last 5 years prior to the COGEN Project have been considered in the analysis. See the detailed netting analysis on Pages 1 through 32 of the emissions calculations spreadsheet.

Emission Reduction from shutdown of existing Units BW Boiler, E Boiler, L Boiler and conversion of BW1 and BW2 boiler from coal-fired to Natural gas-fired (Based on 2005 and 2006 actual emissions)

	2005 and 2006 Baseline Actual Emission for Boilers (tons/year)											
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$ ***	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**CO2**	**CH4**	**N2O**	**GHGs**
2005												
BW BOILER	1.14	1.14	1.14	0.09	0.83	12.6	42.1	7.5E-05	18,060	0.35	0.33	18,167
E BOILER	311	199	105	2671	1.66	166	249	1.9E-04	180,812	1.99	1.33	181,257
L BOILER	118	75.6	40	1,014	0.63	62.9	90	7.3E-05	67,783	0.5	0.38	67,908
BW1 BOILER	51.9	51.9	50	1,270	2.36	19.7	865	2.3E-04	208,270	1.57	1.18	208,661
BW2 BOILER	48.2	48.2	46.3	1,178	2.19	18.2	802	2.1E-04	193,202	1.46	1.09	193,564
TOTAL FOR 2005	**530**	**376**	**243**	**6,133**	**7.66**	**279**	**2,047**	**7.8E-04**	**668,127**	**5.87**	**4.31**	**669,558**
2006												
BW BOILER	0.73	0.73	0.73	0.06	0.53	8.02	26.74	4.8E-05	11,460	0.22	0.21	11,528
E BOILER	288	184	97.4	2,483	1.53	153	230.1	1.8E-04	167,287	1.84	1.23	167,699
L BOILER	112	71.7	37.9	967	0.6	59.8	89.6	7.0E-04	64,349	0.48	0.36	64,468
BW1 BOILER	58.7	58.7	56.8	1379	2.32	19.3	849.4	2.3E-04	204,568	1.54	1.16	204,952
BW2 BOILER	58	58	56.1	1363	2.29	19.1	839.7	2.2E-04	202,217	1.53	1.14	202,597
TOTAL FOR 2006	**517**	**373**	**249**	**6,192**	**7.26**	**260**	**2,035**	**7.4E-04**	**649,881**	**5.61**	**4.10**	**651,243**

TOTAL ACTUAL EMISSIONS FOR AFFECTED UNITS BY YEAR

	2005 and 2006 Baseline Actual Emission (tons/year)											
Year	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**CO2**	**CH4**	**N2O**	**GHGs**
2005-	**530**	**376**	**243**	**6,133**	**7.66**	**279**	**2,047**	**7.8E-04**	**668,127**	**5.87**	**4.31**	**669,558**
2006	**517**	**373**	**249**	**6,192**	**7.26**	**260**	**2,035**	**7.4E-04**	**649,881**	**5.61**	**4.10**	**651,243**
Average Actual Emissions for the Affected Units	**524**	**375**	**246**	**6163**	**7.46**	**269**	**2041**	**7.6E-04**	**659,004**	**5.74**	**4.20**	**660,400**

Scenario 1: No AOS
Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions Net Emissions

	Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions (Tons per year)					
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NO_X**	**GHGs**
COGEN Project Emission Unit PTE	83	83	83	341	1239	1,331,649
S 16 Sheet Line	3.78	0.29	0.29	--	--	--
Silo 75	1.97	1.97	1.97	--	--	--
Project Delta	1.98	1.98	1.98	8.21	4.89	1,197
Contemporaneous Emission Increase	90.7	87	87	349	1244	1,332,846
Contemporaneous Emission Decrease (Shutdown of three boilers and conversion of BW1 and BW2 to natural gas fired)	-524	-375	-246	-269	-2106	-659,004
Net Emission Increase	-433	-288	-159	80	-862	673,842
PSD Significant Level	25	15	10	100	40	75,000 CO_2e

The GHG emissions from this modification are equal to or greater than seventy-five thousand (75,000) tons of CO2 equivalent (CO2e) emissions per year. Therefore, pursuant to 326 IAC 2-2, the GHG emissions are subject to regulation and the PSD requirements do apply to the GHG emissions.

Scenario 2: AOS 1-COGEN Controlled with CO CAT and SCR

Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions Net Emissions

	Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions (Tons per year)					
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NO_X**	**GHGs**
COGEN Project Contemporaneous Emission Increase	127	127	127	341	511	1,331,649
S 16 Sheet Line	3.78	0.29	0.29	--	--	--
Silo 75	1.97	1.97	1.97	--	--	--
Project Delta	1.98	1.98	1.98	8.21	4.89	1,197
Contemporaneous Emission Increase	135	131	131	349	516	1,332,846

	Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions (Tons per year)					
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NO_X**	**GHGs**
Contemporaneous Emission Decrease (Shutdown of four boilers and conversion of BW1 and BW2 to natural gas fired)	-524	-375	-246	-269	-2106	-659,004
Net Emission Increase	-389	-244	-115	80	-1590	673,842
PSD Significant Level	25	15	10	100	40	75,000 CO_2e

The GHG emissions from this modification are equal to or greater than seventy-five thousand (75,000) tons of CO2 equivalent (CO2e) emissions per year. Therefore, pursuant to 326 IAC 2-2, the GHG emissions are subject to regulation and the PSD requirements do apply to the GHG emissions.

Scenario 3: AOS 2-Install CG1/AUX2 BOILER and shut down BW1/BW2 BOILERs

Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions

	Net Emissions Increases/Decreases based on 2005 and 2006 Actual Emissions (Tons per year)					
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**NO_X**	**GHGs**
COGEN Project Contemporaneous Emission Increase	89	89	89	244	1252	1,343,057
S 16 Sheet Line	3.78	0.29	0.29	--	--	--
Silo 75	1.97	1.97	1.97	--	--	--
Project Delta	1.98	1.98	1.98	8.21	4.89	1,197
Contemporaneous Emission Increase	97	91	91	252	1257	1,344,254
Contemporaneous Emission Decrease (Shutdown of four boilers and conversion of BW1 and BW2 to natural gas fired)	-524	-375	-246	-269	-2106	-659,004
Net Emission Increase	-427	-284	-155	-17	-849	685,250
PSD Significant Level	25	15	10	100	40	75,000 CO_2e

The GHG emissions from this modification are equal to or greater than seventy-five thousand (75,000) tons of CO2 equivalent (CO2e) emissions per year. Therefore, pursuant to 326 IAC 2-2,

the GHG emissions are subject to regulation and the PSD requirements do apply to the GHG emissions.

Non-Aggregate Analysis for COGEN Project and Project Delta

The source submitted an aggregation analysis to supplement the construction permit applications for the COGEN project (Prevention of Significant Deterioration, submitted to IDEM on December 17, 2013) and Project Delta (Minor Source Modification, submitted to IDEM on April 2, 2014). The purpose of this aggregation analysis is to demonstrate that the two projects are not substantially related, either economically or technically. Therefore, the emissions changes from the projects should not be aggregated.

The COGEN project and Project Delta are not economically related due to the following circumstances:

- SABIC has numerous separate business groups at the Mt. Vernon facility. The proposed COGEN project is not being installed as part of any one business unit; instead, it is being installed as part of SABIC's long-term energy strategy, which reduces site-wide utility costs and aligns with their corporate sustainability strategies.
- The main purpose of the COGEN project is to eliminate the combustion of coal at SABIC in order to comply with 40 CFR Part 63, Subpart DDDDD (Boiler MACT).
- Project Delta is being completed to reduce costs associated with the production of CPP Resin. While keeping the annual production rate of CPP Resin the same, the reconfiguration project streamlines the process steps and reduces hazardous air pollutant (HAP) handling costs (e.g., loading and storage).
- The projects have separate accounting systems, budgets, and personnel (e.g., operators, engineers, and clerical staff).

The projects are not technically related, as evident by the following:

- The COGEN project was conceived out of the need to prepare the facility for long-term energy production, driven by future increased regulatory stringency on coal combustion (Boiler MACT). The site infrastructure needs do not depend on the technology used in CPP Resin.
- The energy needs in CPP Resin and for Project Delta are independent from how the site energy infrastructure produces energy.
- The COGEN project and Project Delta are two separate projects and were developed independently.

Federal Rule Applicability Determination

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
COGEN (CO)	Y	Y	> 100	< 100	100	Y	N
COGEN (VOC)	Y	Y	> 100	< 100	100	Y	N
COGEN (NOx)	Y	N	> 100	< 100	100	N	N
SHEETFUMES	Y	Y	> 100	< 100	100	Y	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to COGEN for VOC and CO upon start-up. A CAM plan has been incorporated into the permit modification.

The PTE of emissions from these emission units are less than the threshold of 100 tons per year and the emission units have no control devices or limitations. Therefore, Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units for PM, PM10, PM2.5 and SO2 as part of this modification.

(b) The requirements of Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units 40 CFR 60 Subpart Db, does not apply to the proposed HRSG units. 40 CFR 60.40b(i) exempts HRSGs associated with stationary combustion turbines that meet the requirements of subpart KKKK. Since the proposed HRSGs would be subject to the requirements of 40 CFR 60 Subpart KKKK, Subpart Db would not apply.

(c) The requirements of the New Source Performance Standard, 40 CFR 60, Subpart GG, Standard of Performance for Stationary Gas Turbines apply to combustion turbines constructed or modified after October 3, 1977, with heat input equal to or greater than 10 MMBtu/hr [40 CFR 60.330]. However, NSPS GG has been supplanted by a newer subpart (NSPS KKKK) that exempts subject units from NSPS GG [40 CFR 60.4305(b)]. The combustion turbines are subject to the requirements of NSPS KKKK and are, therefore, exempt from the requirements of 40 CFR Subpart GG.

(d) The boilers, identified as BW1-BOILER and BW2-BOILER are existing facilities that were installed in 1979. These boilers are currently not subject to requirements of the New Source Performance Standard, 40 CFR 60 Subpart Db since the rule only applies to facilities constructed, modified, or reconstructed after June 19, 1984. Although as part of the COGEN project, BW1-BOILER and BW2-BOILER are being retrofitted with natural gas-fired burners, the project will not result in construction or modification of these affected facilities as defined in 40 CFR Part 60.2 nor reconstruction as described in 40 CFR Part 60.15. In addition, the project will not increase emissions of an air pollutant to which a standard applies. Therefore, pursuant to 40 CFR 60.40b(a) the two boilers are not affected facilities.

(e) The auxiliary boiler, identified as AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is subject to the requirements of the New Source Performance Standard, 40 CFR 60, Subpart Db, Standard of Performance for Industrial -Commercial Institutional Steam Generating Unit, which is incorporated by reference as 326 IAC 12 because the boiler will commence construction, modification, or reconstruction after June 19, 1984, and that have a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)). The auxiliary boiler, identified as AUX BOILER has a heat input capacity of 249 MMBtu/hr. The specific facilities subject to this rule includes the following.

(1) One (1) natural gas-fired auxiliary boiler, identified as AUX BOILER permitted in 2014, with a maximum heat input capacity of 249 MMBtu per hour, equipped with low NOx burners (LNB) to reduce NOx emissions, and exhausting to stack 19-002. Under 40 CFR Part 60, Subpart Db, the auxiliary boiler is considered a steam generating unit.

(2) One (1) natural gas-fired auxiliary boiler, identified as AUX2 BOILER permitted in 2014, with a maximum heat input capacity of 249 MMBtu per hour, equipped with low NOx burners (LNB) to reduce NOx emissions, and exhausting to stack 19-004. Under 40 CFR Part 60, Subpart Db, the auxiliary boiler is considered a steam generating unit.

(3) One (1) natural gas-fired boiler, identified as CG1 BOILER permitted in 2014, with a maximum heat input capacity of 249 MMBtu per hour, equipped with low NOx burners (LNB) to reduce NOx emissions, and exhausting to stack 19-005. Under 40 CFR Part 60, Subpart Db, the boiler is considered a steam generating unit.

The boiler is subject to the following portions of Subpart Db:

(1) 40 CFR 60.44b(a)
(2) 40 CFR 60.44b(h)
(3) 40 CFR 60.44b(i)
(4) 40 CFR 60.46b(c)
(5) 40 CFR 60.46b(e)(4)
(6) 40 CFR 60.48b(b)
(7) 40 CFR 60.48b(c)
(8) 40 CFR 60.48b(d)
(9) 40 CFR 60.48b(e)
(10) 40 CFR 60.48b(f)
(11) 40 CFR 60.48b(g)
(12) 40 CFR 60.49b(d)
(13) 40 CFR 60.49b(g)
(14) 40 CFR 60.49b(h)
(15) 40 CFR 60.49b(i)
(16) 40 CFR 60.49b(v)
(17) 40 CFR 60.49b(w)

(f) The requirements of the New Source Performance Standard for Stationary Combustion Turbines, 40 CFR 60, Subpart KKKK applies to combustion turbines constructed, modified, or reconstructed after February 18, 2005, with heat input equal to or greater than 10 MMBtu/hr based on the higher heating value of the fuel [40 CFR 60.4305(a)]. The heat input from associated HRSGs and duct burners is not included in the applicability determination; however, the subpart applies to emissions from the combustion turbines, HRSGs, and duct burners if the heat input of the combustion turbines exceeds 10 MMBtu/hr. The proposed combustion turbine for this source has peak heat inputs greater than 10 MMBtu/hr. Therefore, the combustion turbine, HRSG, and duct burner are subject to the requirements of 40 CFR 60, Subpart KKKK.

(1) One (1) natural gas fired combustion turbine unit, with a natural gas fired duct burner identified as COGEN, permitted in 2014, with a total rated heat input capacity of 1,812 MMBtu/hr; with an oxidation catalyst system to reduce emissions of CO and VOCs, and exhausting to stack 19-001. The stack has continuous emissions monitors (CEMS) for NOx emissions.

*Note: The heat recovery steam generator (HRSG) is not a source of emissions. It has been included for clarity as it is a part of the entire source and operates in

conjunction with the duct burner and combustion turbine which are a source of emissions.

The combustion turbines, HRSGs and duct burners are subject to the following Sections of 40 CFR Part 60, Subpart KKKK.

1. 40 CFR 60.4305(a and b)
2. 40 CFR 60.4315
3. 40 CFR 60.4320
4. 40 CFR 60.4330
5. 40 CFR 60.4333
6. 40 CFR 60.4340
7. 40 CFR 60.4345
8. 40 CFR 60.4350
9. 40 CFR 60.4355
10. 40 CFR 60.4360
11. 40 CFR 60.4365
12. 40 CFR 60.4370
13. 40 CFR 60.4375
14. 40 CFR 60.4380
15. 40 CFR 60.4385
16. 40 CFR 60.4395
17. 40 CFR 60.4400
18. 40 CFR 60.4405
19. 40 CFR 60.4410
20. 40 CFR 60.4415

(g) The requirements of National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines 40 CFR 63, Subpart YYYY has been stayed for two subcategories of the NESHAP for stationary combustion turbines: lean premix gas-fired turbines and diffusion flame gas-fired turbines. The stay essentially includes all types of natural gas-fired turbines. The NESHAP rule still applies to SABIC's proposed COGEN unit, but the specific requirements are not in effect. As of the date of submission of this application, there has been no progress on the promulgation of the rule. The stationary combustion turbine proposed for this project is subject to this subpart because its stationary combustion turbine is part of a cogeneration cycle combustion system. Thus, at this time, other than the initial notification requirements under 40 CFR 63.6145, SABIC does not need to comply with any other requirements of the rule until US EPA takes final action to require compliance.

(1) One (1) natural gas fired combustion turbine unit, with a natural gas fired duct burner identified as COGEN, permitted in 2014, with a total rated heat input capacity of 1,812 MMBtu/hr; with an oxidation catalyst system to reduce emissions of CO and VOCs, and exhausting to stack 19-001. The stack has continuous emissions monitors (CEMS) for NOx emissions.

*Note: The heat recovery steam generator (HRSG) is not a source of emissions. It has been included for clarity as it is a part of the entire source and operates in conjunction with the duct burner and combustion turbine which are a source of emissions.

1. 40 CFR 63.6165
2. Table 7 of Subpart YYYY of Part 63

The provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise

specified in 40 CFR 63, Subpart YYYY.

The proposed HRSG and duct burner components of the proposed COGEN unit are not regulated under 40 CFR 63, Subpart YYYY as per 40 CFR 63.6092.

(h) **40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters:**

The National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and process Heaters, 40 CFR 63, Subpart DDDDD, was initially promulgated on September 13, 2004. On June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded the standards. New rule amendments were promulgated on March 21, 2011 (76 FR 15608). On May 18, 2011, the EPA issued a delay of the effective dates for Subpart DDDDD until the proceedings for judicial review of the rules were completed or the EPA completed its reconsideration of the rule, whichever was earlier (76 FR 28662). On January 9, 2012, the US District Court for the District of Columbia issued an order (*Sierra Club vs. U.S. EPA*, No. 11-1278) to vacate and remand the Delay Notice issued on May 18, 2011. Therefore, the provisions of 40 CFR 63, Subpart DDDDD, as issued on March 21, 2011 and subsequently amended are effective and shall be included in the permit as applicable.

Therefore, the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected), BW1-Boiler and BW2-Boiler are subject to the requirements of National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63. Subpart DDDDD. The units subject to this rule include the following:

(1) One (1) natural gas fired auxiliary boiler, identified as AUX BOILER permitted in 2014, with a maximum heat input capacity of 249 MMBtu per hour, equipped with low NOx burners (LNB) to reduce NOx emissions, and exhausting to stack 19-002. Under 40 CFR Part 60, Subpart Db, the auxiliary boiler is considered a steam generating unit.

(2) One (1) natural gas fired auxiliary boiler, identified as AUX2 BOILER permitted in 2014, with a maximum heat input capacity of 249 MMBtu per hour, equipped with low NOx burners (LNB) to reduce NOx emissions, and exhausting to stack 19-004. Under 40 CFR Part 60, Subpart Db, the auxiliary boiler is considered a steam generating unit.

(3) One (1) natural gas fired boiler, identified as CG1 BOILER permitted in 2014, with a maximum heat input capacity of 249 MMBtu per hour, equipped with low NOx burners (LNB) to reduce NOx emissions, and exhausting to stack 19-005. Under 40 CFR Part 60, Subpart Db, the boiler is considered a steam generating unit.

Boiler MACT Applicability Summary **AFTER** COGEN Project Is Complete

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490
(4) 40 CFR 63.7490(a)
(5) 40 CFR 63.7490(a)(2)
(6) 40 CFR 63.7490(b)
(7) 40 CFR 63.7495(a)
(8) 40 CFR 63.7495(d)

(9) 40 CFR 63.7499(l)
(10) 40 CFR 63.7500(a)(1 ad 3)
(11) 40 CFR 63.7500(b)
(12) 40 CFR 63.7500(e and f)
(13) 40 CFR 63.7501
(14) 40 CFR 63.7505(a)
(16) 40 CFR 63.7510(g)
(16) 40 CFR 63.7515(d)
(17) 40 CFR 63.7530(d and f)
(18) 40 CFR 63.7540(a)
(19) 40 CFR 63.7540(a),(10)(i-v)
(20) 40 CFR 63.7540(a),(10)(vi)(A-C)
(21) 40 CFR 63.7540(a),(13)
(22) 40 CFR 63.7540(b)
(23) 40 CFR 63.7540(d)
(24) 40 CFR 63.7545(a)
(25) 40 CFR 63.7545(c)
(26) 40 CFR 63.7545(e),(1)
(27) 40 CFR 63.7545(e),(6-7)
(28) 40 CFR 63.7545(e),(8)(i-ii)
(29) 40 CFR 63.7545(f),(1-5)
(30) 40 CFR 63.7545(h),(1-3)
(31) 40 CFR 63.7550(a)
(32) 40 CFR 63.7550(b),(1-4)
(33) 40 CFR 63.7550(c),(1)
(34) 40 CFR 63.7550(c),(5)(i-iv)
(35) 40 CFR 63.7550(c),(5)(xiv and xvii)
(36) 40 CFR 63.7550(h),(3)
(37) 40 CFR 63.7555(a),(1-2)
(38) 40 CFR 63.7555(i and j)
(39) 40 CFR 63.7560(a-c)
(40) 40 CFR 63.7565
(41) 40 CFR 63.7570(a)
(42) 40 CFR 63.7570(b)(1-5)
(43) 40 CFR 63.7575

The provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart DDDDD.

1. BW1-BOILER
2. BW2-BOILER

These emission units are subject to the following portions of 40 CFR 63, Subpart DDDDD:

Boiler MACT Applicability Summary **BEFORE** COGEN Project Is Complete;

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490 (a)(1)
(4) 40 CFR 63.7490(d)
(5) 40 CFR 63.7495(b)
(6) 40 CFR 63.7499(a)
(7) 40 CFR 63.7500(a)(1)
(8) 40 CFR 63.7500(a)(2)

(9) 40 CFR 63.7500(a)(3)
(10) 40 CFR 63.7500(b)
(11) 40 CFR 63.7500(f)
(12) 40 CFR 63.7501
(13) 40 CFR 63.7501(b)
(14) 40 CFR 63.7505(a)
(15) 40 CFR 63.7530(f)
(16) 40 CFR 63.7530(g)
(17) 40 CFR 63.7540(a)
(18) 40 CFR 63.7540(b)
(19) 40 CFR 63.7545(a)
(20) 40 CFR 63.7545(b)*
(21) 40 CFR 63.7545(e),(1)
(22) 40 CFR 63.7545(e),(6-7)
(23) 40 CFR 63.7545(e),(8)(i-ii)
(24) 40 CFR 63.7545(f),(1-5)
(25) 40 CFR 63.7550(a)
(26) 40 CFR 63.7550(b),(1-4)
(27) 40 CFR 63.7550(c),(1)
(28) 40 CFR 63.7550(c),(5)(i-iv)
(29) 40 CFR 63.7550(c),(5)(xiv and xvii)
(30) 40 CFR 63.7550(h)
(31) 40 CFR 63.7550(h),(3)
(32) 40 CFR 63.7555(a),(1)
(33) 40 CFR 63.7555(a),(2)
(34) 40 CFR 63.7555(i and j)
(35) 40 CFR 63.7560(a-c)
(36) 40 CFR 63.7565
(37) 40 CFR 63.7570(a)
(38) 40 CFR 63.7570(b),(1-5)
(39) 40 CFR 63.7575

* Initial notification for indicated emission units was submitted May 16, 2013.

Boiler MACT Applicability Summary **AFTER** COGEN Project Is Complete;

(1) 40 CFR 63.7480
(2) 40 CFR 63.7485
(3) 40 CFR 63.7490
(4) 40 CFR 63.7490(a)
(5) 40 CFR 63.7490(a)(1)
(6) 40 CFR 63.7490(d)
(7) 40 CFR 63.7495(b)
(8) 40 CFR 63.7495(d)
(9) 40 CFR 63.7499(l)
(10) 40 CFR 63.7500(a)(1 ad 3)
(11) 40 CFR 63.7500(b)
(12) 40 CFR 63.7500(e and f)
(13) 40 CFR 63.7501
(14) 40 CFR 63.7505(a)
(15) 40 CFR 63.7510(e)
(16) 40 CFR 63.7515(d)
(17) 40 CFR 63.7530(d and f)
(18) 40 CFR 63.7540(a)
(19) 40 CFR 63.7540(a)(10)(i-v)
(20) 40 CFR 63.7540(a)(10)(vi)(A-C)
(21) 40 CFR 63.7540(a)(13)

(22) 40 CFR 63.7540(b)
(23) 40 CFR 63.7540(d)
(24) 40 CFR 63.7545(a)
(25) 40 CFR 63.7545(b)*
(26) 40 CFR 63.7545(e)(1)
(27) 40 CFR 63.7545(e)(6-7)
(28) 40 CFR 63.7545(e)(8)(i-ii)
(29) 40 CFR 63.7545(f)(1-5)
(30) 40 CFR 63.7545(h)(1-3)
(31) 40 CFR 63.7550(a)
(32) 40 CFR 63.7550(b),(1-4)
(32) 40 CFR 63.7550(c),(1)
(33) 40 CFR 63.7550(c),(5)(i-iv)
(34) 40 CFR 63.7550(c),(5)(xiv and xvii)
(35) 40 CFR 63.7550(h),(3)
(36) 40 CFR 63.7555(a)(1-2)
(37) 40 CFR 63.7555(i and j)
(38) 40 CFR 63.7560(a-c)
(39) 40 CFR 63.7565
(40) 40 CFR 63.7570(a)
(41) 40 CFR 63.7570(b)(1-5)
(49) 40 CFR 63.7575
* Initial notification for indicated emission units was submitted May 16, 2013.

The provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart DDDDD.

1 - Hour NO_2 NAAQS Determination

The SABIC facility in Mt. Vernon, Indiana was determined to be culpable for a 1-hour NO_2 NAAQS violation in the PSD modeling for Midwest Fertilizer. SABIC has changed the scope of the CoGen project to include the following: reactivate the Riley Boiler; shut down BW1-BOILER and BW2-BOILER; re-duct the H BOILER to the stack for BW1-BOILER and BW2-BOILER; install a second Package Boiler near the COGEN; and install a third Package Boiler near the Ultem area. No significant changes to criteria pollutants emissions from the COGEN project are expected, however a culpability modeling analysis was required.

Midwest Fertilizer's NAAQS modeling was re-run to account for the future emissions from the SABIC facility after the COGEN Project is completed. The modeling showed that the highest contribution from the SABIC facility towards a 1-hour NO_2 NAAQS violation was 0.71 $\mu g/m^3$. The SABIC facility contributed concentrations towards a 1-hour NO_2 NAAQS violation that are under the significant impact level of 7.5 $\mu g/m^3$, as shown in Table 1 below. Therefore, it is concluded that the COGEN Project and the entire SABIC facility will not cause or contribute to a violation of the 1-hour NO_2 NAAQS. For a detailed analysis see Appendix C of the permit.

State Rule Applicability Determination

326 IAC 2-2 (Prevention of Significant Deterioration)
This source was constructed before August 1977, the applicability date for this rule and is one of the 28 listed source categories and has potential to emit of at least one regulated pollutant greater than 100 tons per year before August 7, 1977. This source was a major source pursuant to 326 IAC 2-2 (PSD), prior to August 7, 1977. The CO and VOC emissions are limited so that the netting result is less than the significant levels. The CO and VOC emission limits are as follows;

(a) The total CO emissions from the COGEN Project (COGEN Project consists of BW1-

BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO, COGEN, and AUX BOILER) shall be limited to less than 360 tons CO per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit will ensures that the net emission increase of CO from the COGEN Project is limited below 100 tons per year and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable to 2014 modification.

The following equation shall be used to determine the CO emissions from the COGEN Project:

CO emissions (tons/month) =
{[(Fuel Usage$_{AUX\ BOILER}$) x (CO EF$_{AUX\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{AUX2\ BOILER}$) x (CO EF$_{AUX2\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{CG1\ BOILER}$) x (CO EF$_{CG1\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{COGEN}$) x (CO EF$_{COGEN}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{BW\text{-}1\ BOILER}$) x (CO EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +
[(Fuel Usage$_{BW\text{-}2\ BOILER}$) x (CO EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +
[(Fuel Usage$_{SHEETFUMES}$) x (CO EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$]}/(2000 lbs/ton)

Where:

Fuel Usage$_{AUX\ BOILER}$ = MMScf/month actual fuel usage for AUX BOILER
CO EF$_{AUX\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
CO EF$_{AUX2\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
CO EF$_{CG1\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
(Btu /Scf of natural gas) $_{SABIC}$ = Heat content, in Btu/Scf, of natural gas from AP-42 or vendor data
Fuel Usage$_{COGEN}$ = MMScf/month actual fuel usage for COGEN
CO EF$_{COGEN}$ = 0.0055 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
Fuel Usage$_{BW\text{-}1\ BOILER}$ = MMScf/month actual natural gas fuel usage for BW1-BOILER
Fuel Usage$_{BW\text{-}2\ BOILER}$ = MMScf/month actual natural gas fuel usage for BW2-BOILER
CO EF$_{AP\text{-}42}$ = 84 lbs CO/MMScf emission factor from AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1
(1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$ = 1,020 MMBtu/MMScf heat content of natural gas from AP-42 Chapter 1.4 Natural gas Combustion

(b) The total VOC emissions from the COGEN Project (COGEN Project consists of: BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO, COGEN, AUX BOILER) shall be limited to 39.6 tons VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit will ensures that the emission increased of VOC from the COGEN Project is less than 40 tons per year and renders the requirements of 326 IAC 2-2 Preventions of Significant Deterioration (PSD) not applicable to 2014 modification.

The following equation shall be used to determine the VOC emissions from the COGEN

Project:

VOC emissions (tons/month) =
{[(Fuel $Usage_{AUX\ BOILER}$) x (VOC $EF_{AUX\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel $Usage_{AUX2\ BOILER}$) x (VOC $EF_{AUX2\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel $Usage_{CG1\ BOILER}$) x (VOC $EF_{CG1\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel $Usage_{COGEN}$) x (VOC EF_{COGEN}) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel $Usage_{BW\text{-}1\ BOILER}$) x (VOC $EF_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +
[(Fuel $Usage_{BW\text{-}2\ BOILER}$) x (VOC $EF_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$] +
[(Fuel $Usage_{SHEETFUMES}$, MMScf/month) x (VOC $EF_{AP\text{-}42}$, lb/MMScf) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$]}/(2000 lbs/ton)

Where:

Fuel $Usage_{AUX\ BOILER}$ = MMScf/month actual fuel usage for AUX BOILER
VOC $EF_{AUX\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test VOC $EF_{AUX2\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
VOC $EF_{CG1\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
(Btu /Scf of natural gas)$_{SABIC}$ = Heat content, in Btu/Scf, of natural gas from AP-42 or vendor data
Fuel $Usage_{COGEN}$ = MMScf/month actual fuel usage for COGEN
VOC EF_{COGEN} = 0.0025 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
Fuel $Usage_{BW\text{-}1\ BOILER}$ = MMScf/month actual fuel usage for BW1-BOILER
Fuel $Usage_{BW\text{-}2\ BOILER}$ = MMScf/month actual fuel usage for BW2-BOILER
VOC $EF_{AP\text{-}42}$ = 5.5 lbs VOC/MMScf emission factor from AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2
(1,020 MMBtu/MMScf of natural gas)$_{AP\text{-}42}$ = 1,020 MMBtu/MMScf heat content of natural gas from AP-42 Chapter 1.4 Natural gas Combustion

326 IAC 2-2-3 (PSD BACT: Control Technology Review Requirements)
Pursuant to PSD/Significant Source Modification T129-33998-00002 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the Best Available Control Technologies (BACT) for CO2e emissions at the source shall be as follows:

The GHGs BACT for the Natural Gas Combustion Turbine, identified as COGEN shall be as follows;

1. COGEN shall use natural gas only;

2. COGEN shall achieve a minimum net plant efficiency of 85% (LHV); and

3. The total CO2e emissions from COGEN shall be limited to 937,379 tons of CO2e per twelve (12) consecutive month period with compliance determined on a monthly basis.

The GHGs BACT for the Natural Gas-Fired Boiler, identified as AUX BOILER shall be as follows;

1. The boiler shall fire natural gas only.

2. Boiler insulation;

3. Efficient Burner design;

4. Improved Combustion Measures: Optimization & Digital Control System;

5. Minimization of Air infiltration;

6. Improved Combustion Measures: Combustion Tuning;

7. Operating and Maintenance (O&M) Practices;
8. Steam line maintenance;

9. The Boiler shall use a high thermal efficiency of 80% (higher heating value, HHV); and

10. Total CO2e emissions from the auxiliary boiler (AUX BOILER) shall not exceed 133,521 tons of CO2e per 12 consecutive month period with compliance determined on a monthly basis.

The GHGs BACT for the Natural Gas-Fired Boiler Auxiliary Boiler, identified as AUX2 BOILER:

1. The boiler shall fire natural gas only.

2. Boiler insulation;

3. Efficient Burner design;

4. Improved Combustion Measures: Optimization & Digital Control System;

5. Minimization of Air infiltration;

6. Improved Combustion Measures: Combustion Tuning;

7. Operating and Maintenance (O&M) Practices;

8. Steam line maintenance;

9. The Boiler shall use a high thermal efficiency of 80% (higher heating value, HHV); and

10. Total CO2e emissions from the auxiliary boiler (AUX2 BOILER) shall not exceed 133,521 tons of CO2e per 12 consecutive month period with compliance determined on a monthly basis.

The GHGs BACT for the Natural Gas-Fired Boiler, identified as CG1 BOILER:

1. The boiler shall fire natural gas only.

2. Boiler insulation;

3. Efficient Burner design;

4. Improved Combustion Measures: Optimization & Digital Control System;

5. Minimization of Air infiltration;

6. Improved Combustion Measures: Combustion Tuning;

7. Operating and Maintenance (O&M) Practices;

8. Steam line maintenance;

9. The Boiler shall use a high thermal efficiency of 80% (higher heating value, HHV); and

10. Total CO2e emissions from the auxiliary boiler (PB) shall not exceed 133,521 tons of CO2e per 12 consecutive month period with compliance determined on a monthly basis.

11. If CG1 BOILER operates as an auxiliary boiler, no additional BACT requirements apply. But if CG1 BOILER is a primary use boiler, the following item will be included as BACT:

    (a) Air Preheater or Economizer.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the COGEN system and the auxiliary boiler will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-4 (Fugitive Dust Emissions)
The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5 because the amount of fugitive particulate matter emissions from unpaved and paved roadways are less than 25 tons per year.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

(a) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission Limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the aux boiler, identified as AUX BOILER shall not exceed 0.14 pounds per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Q = (Existing Boiler Capacity - Boilers removed + 3 New BOILERS + Duct Burner Capacity) MMBtu/hour

Q = (2,301.4 MMBtu/hour – (173+249+128.7) MMBtu/hour + (249 x3)MMbtu/hour + 486 MMBtu/hour) = 2983.7 MMBtu/hour

(b) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission Limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the duct burner of COGEN shall not exceed 0.14 pounds per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Q = (Existing Boiler Capacity - Boilers removed + 3 New BOILERS + Duct Burner Capacity) MMBtu/hour

Q = (2,301.4 MMBtu/hour – (173+249+128.7) MMBtu/hour + (249 x3) MMBtu/hour + 486 MMBtu/hour) = 2983.7 MMBtu/hour

(c) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission Limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the aux boiler, identified as AUX2 BOILER shall not exceed 0.14 pounds per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Q = (Existing Boiler Capacity - Boilers removed + 3 New BOILERS + Duct Burner Capacity) MMBtu/hour

Q = (2,301.4 MMBtu/hour – (173+249+128.7) MMBtu/hour + (249 x3) MMBtu/hour + 486 MMBtu/hour) = 2983.7 MMBtu/hour

(d) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission Limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the aux boiler, identified as CG1 BOILER shall not exceed 0.14 pounds per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Q = (Existing Boiler Capacity - Boilers removed + 3 New BOILERS + Duct Burner Capacity) MMBtu/hour

Q = (2,301.4 MMBtu/hour – (173+249+128.7) MMBtu/hour + (249 x3) MMBtu/hour + 486 MMBtu/hour) = 2983.7 MMBtu/hour

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations

(a) The potential to emit SO_2 emissions from the natural gas-fired boiler, identified as AUX BOILER is less than 25 tons per year. Therefore, this unit is not subject to the requirements of 326 IAC 7-1.1.

(b) The potential to emit SO_2 emissions from the natural gas-fired boiler, identified as AUX2 BOILER is less than 25 tons per year. Therefore, this unit is not subject to the requirements of 326 IAC 7-1.1.

(c) The potential to emit SO_2 emissions from the natural gas-fired boiler, identified as CG1 BOILER is less than 25 tons per year. Therefore, this unit is not subject to the requirements of 326 IAC 7-1.1.

(d) The potential to emit SO_2 emissions from the Combustion Turbine identified as COGEN is less than 25 tons per year. Therefore, this unit is not subject to the requirements of 326 IAC 7-1.

326 IAC 8-1-6 (New facilities; general reduction requirements)

(a) The natural gas-fired boiler, identified as AUX BOILER was constructed after January 1, 1980 and has potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (BACT) are not applicable to this boiler.

(b) The natural gas-fired boiler, identified as AUX2 BOILER was constructed after January 1, 1980 and has potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (BACT) are not applicable to this boiler.

(c) The natural gas-fired boiler, identified as CG1 BOILER was constructed after January 1, 1980 and has potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (BACT) are not applicable to this boiler.

(d) The Combustion Turbine identified as COGEN was constructed after January 1, 1980 and has potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (BACT) are not applicable to the Combustion Turbine.

326 IAC 24-3 (Clean Air Interstate Rule NOx Ozone Season Trading Program)

This rule applies to any large affected unit as defined pursuant to 326 IAC 24-3-2(51), large affected units include cogeneration units commencing operation on or after January 1, 1999, a unit with a maximum design heat input greater than 250 MMBtu/hr and qualifying as an unaffected unit under the acid rain program. It also applies to units that do not qualify as an unaffected unit under the acid rain program and serve a generator with a nameplate capacity greater than 25 MW, on or after January 1, 1999.

This source is subject to the requirements of 326 IAC 24-3 and shall submit an application for a significant permit modification for the incorporation of the applicable requirements of 326 IAC 24-3. The COGEN project shall not operate until the CAIR Permit has been issued.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D-W of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The Compliance Determination Requirements applicable to this modification are as follows:

Testing Requirements

(a) Testing Requirements

Emission units	Control device	When to test	Pollutants	Frequency of testing	Limit or Requirement
COGEN	Oxidation Catalyst	Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup	CO	5 year	326 IAC 2-2
COGEN	Oxidation Catalyst	Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup	VOC	5 year	326 IAC 2-2
COGEN	No control	Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup	Net Plant Efficiency	one time testing	326 IAC 2-2-3
SHEETFUMES	RTO	Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup	VOC	5 year	326 IAC 2-2
AUX BOILER (and AUX2 BOILER and CG1 BOILER, if Condition W.1.19 is elected)	No control	Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup	CO	one time testing	326 IAC 2-2
AUX BOILER (and AUX2 BOILER and CG1 BOILER, if Condition W.1.19 is elected)	No control	Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup	VOC	one time testing	326 IAC 2-2
AUX BOILER (and AUX2 BOILER and CG1 BOILER, if Condition W.1.19 is elected)	No control	Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup	Thermal Efficiency	one time testing	326 IAC 2-2-3

(b) The compliance monitoring requirements applicable to this source are as follows:

Control	**Parameter**	**Frequency**	**Range/ Value**	**Excursions and Exceedances**	**Limit or Requirement**
Oxidation Catalyst	Temperature	Continuous	> 525°F or as determined from the last compliance stack test	Response steps	326 IAC 2-2
RTO	Temperature	Continuous	> 900°F or as determined from the last compliance stack test	Response steps	326 IAC 2-2

(c) The compliance monitoring requirements applicable to this source are as follows:

Control	**Parameter**	**Frequency**	**Value**	**Excursions and Exceedances**	**Requirement**
COGEN (SCR)	NOx CEMS	Continuous	N/A	Continuous emission monitoring system measurement data.	40 CFR 60, Subpart KKKK

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 129-30384-00002. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1: The source has added new emission units to Section A. and the existing emission units have been updated and revised throughout the permit accordingly.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

A.3 Boilerhouse II [Section D]

A.3.1 Boilerhouse II, Building 2

Boilerhouse II Affected Facilities/Sources

(a) The affected facilities **at Boilerhouse II that are** subject to 40 CFR 60, Subpart Db are identified as NE BOILER, BW GAS, and H BOILER. The affected facility is a device which combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium, commences construction, modification, or reconstruction after June 19, 1984, and has a heat input capacity of greater than 100 million Btu per hour.

(b) ~~[Reserved]~~ **BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER.**

The Boilerhouse II area includes boilers that are part of existing affected sources subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new

affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The "unit designed to burn coal/solid fuel subcategory" includes any boiler or process heater than burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

The following emissions units constitute the existing affected source for the "unit designed to burn coal/solid fossil fuel subcategory": BW1-BOILER, BW2-BOILER, and E BOILER. For clarification purposes, E BOILER is located in Boilerhouse I, Section K of this Part 70 permit.

After the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and shutdown of E BOILER, the BW1-BOILER, BW2-BOILER, and E BOILER will no longer be part of the "unit designed to burn coal/solid fossil fuel subcategory."

(2) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW BOILER, R BOILER, H-390, H-109, H-900, H-900B, and H-520. For clarification purposes, R BOILER and BW BOILER are located in Boilerhouse I, Section K of this Part 70 permit; H-390 and H-109 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

(b) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER.

The Boilerhouse II area includes boilers which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for

periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW1-BOILER, R BOILER, BW2-BOILER, H-390, H-109, H-900, H-900B, and H-520. For clarification purposes, R BOILER is located in Boilerhouse I, Section K of this Part 70 permit; H-390 and H-109 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

The following emissions units constitutes a new affected source for the "unit designed to burn gas 1 subcategory": AUX BOILER and if the alternative operating scenario in W.1.19 is elected, AUX2 BOILER and CG1 BOILER (in Section W of this Part 70 permit.)

(2) [RESERVED]

Natural Gas-fired boilers

(c) The three (3) natural gas-fired boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-101	NE BOILER	NEBRASKA BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1989
01-014	BW GAS	B&W #3 GAS BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1996
01-100	H BOILER	HOLMAN BOILER VENT natural gas-fired, low-NOx burners and flue gas recirculation	None	None	200 MMBtu/hr	1996

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

Coal/Natural Gas-fired boilers
BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two (2) coal -fired and natural gas-fired boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326

IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-001	BW1-BOILER	B&W #1 BOILER Coal -fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979
01-001	BW2-BOILER	B&W #2 BOILER Coal -fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two boilers converted from coal-fired to natural gas-fired only that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-001	**BW1-BOILER**	**B&W #1 BOILER Natural gas-fired only**	**None**	**None**	**249 MMBtu/hr**	**1979, modified in 2014**
01-001	**BW2-BOILER**	**B&W #2 BOILER Natural gas-fired only**	**None**	**None**	**249 MMBtu/hr**	**1979, modified in 2014**

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

Ash Handling - BEFORE Coal Ceases to Be Transferred at Boilerhouse II

(e) The ash handling equipment located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-006	BF-ASVB	BAG FILTER FOR ASH HANDLING SYSTEM	None	Bagfilter	11.3 tons/hr	1979

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-005	TRDB	TRIPPER ROOM DUST BLOWER	None	None	30 tons/hr	N/A
01-007	ASVBF	ASH SILO BAG FILTER	Bagfilter*	None	11.3 tons/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))
* There are no control requirements for the bagfilter associated with stack/vent ID 01-007 because uncontrolled emissions/hour are only about 10 percent of the allowable emissions for this emission unit.

Ash Handling - AFTER Coal Ceases to Be Transferred at Boilerhouse II

(e) [**RESERVED]**

A.4 Phenol [Section E]

A.4.1 Phenol, Buildings 40 and 42

Phenol Affected Facilities/Sources

(a) The Phenol Chemical Manufacturing Process Unit (PhCMPU) subject to 40 CFR 63, Subpart F, G, and H is identified by its primary product, which is Phenol. The PhCMPU consists of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture Phenol. A chemical manufacturing process unit consists of more than one unit operation. The PhCMPU includes air oxidation reactors and their associated product separators and recovery devices; reactors and their associated product separators and recovery devices; distillation units and their associated distillate receivers and recovery devices; associated unit operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. A chemical manufacturing process unit includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems.
****

(f) ~~[Reserved]~~ **The Phenol area includes a process heater, identified as H-520, which is part of an existing affected source (unit designed to burn gas 1 subcategory) subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The**

requirements of 40 CFR 63, Subpart DDDDD that are applicable to H-520 are specified in Section D.1 of this permit.
****

A.8 Phosgene [Section I]

A.8.1 Phosgene, Building 6

Phosgene Affected Facilities/Sources

(a) The Phosgene Reaction, Purification, and Transfer Operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

****

Phosgene Carbon Monoxide Generators and COS (Carbonyl Sulfide) Stream

(b) The Phosgene Carbon Monoxide Generators consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit*	Emission Unit Description	Air Pollution Control Devices**	Integral Devices (b) ***	Maximum Capacity[(c)]	Date of Construct
08-010	COG1	CO GENERATOR NO. 1	COS Vent Oxidizer (08-706) OR COS Flare (08-707)	Carbon Adsorbers V-948, V-949, V-050A, V-951A, V-9020, V-9021	0.17 tons/hr	N/A
08-011	COG2	CO GENERATOR NO. 2			0.17 tons/hr	N/A
08-012	COG3	CO GENERATOR NO. 3			0.17 tons/hr	N/A
08-013	COG4	CO GENERATOR NO. 4			0.17 tons/hr	N/A
08-014	COG5	CO GENERATOR NO. 5			0.17 tons/hr	N/A
08-015	COG6	CO GENERATOR NO. 6			0.17 tons/hr	N/A
08-016	COG7	CO GENERATOR NO. 7			0.17 tons/hr	N/A
08-017	COG8	CO GENERATOR NO. 8			0.17 tons/hr	N/A
08-018	COG9	CO GENERATOR NO. 9			0.17 tons/hr	N/A
08-019	COG10	CO GENERATOR NO. 10			0.17 tons/hr	N/A
08-020	COG11	CO GENERATOR NO. 11			0.17 tons/hr	N/A
08-021	COG12	CO GENERATOR NO. 12			0.17 tons/hr	N/A
08-022	COG13	CO GENERATOR NO. 13			0.17 tons/hr	N/A
08-023	COG14	CO GENERATOR NO. 14			0.17 tons/hr	N/A
08-024	COG15	CO GENERATOR NO. 15			0.17 tons/hr	N/A
08-025	COG16	CO GENERATOR NO. 16			0.17 tons/hr	N/A
08-708	F-961A	F-964A CO BAGHOUSE	None	None	5.78 tons/hr	2006
08-709	F-961B	F-964B CO BAGHOUSE	None	None	5.78 tons/hr	2006
08-710	V-961A	F-961A BAGHOUSE RECEIVER	None	None	N/A	2006
08-711	V-961B	F-961B BAGHOUSE RECEIVER	None	None	N/A	2006

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

* The 16 CO generators operate in a continuous mode and the CO produced by the generators is normally routed through the purification system and into the phosgene reactor. Each of the 16 generators has a stack/vent that is only used during startup, shutdown, and malfunction events.

** **BEFORE Shutdown of E BOILER and BW-BOILER -**In addition to having the option to use the **COS Vent** Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either the ~~Erie Boiler~~ **E BOILER**, ~~Lasker Boiler,~~ B&W **BOILER** ~~Boiler~~, and/or ~~Riley Boiler~~ **R BOILER**. These boilers are described in Section K of this permit. The COS Flare (08-707) only serves as a back-up to the COS Vent Oxidizer (08-706) **or during safety interlock of the system. AFTER Shutdown of E BOILER and BW-BOILER - In addition to having the option to use the COS Vent Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to R BOILER. The boiler is described in Section K of this permit. The COS Flare (08-707) only serves as the back-up to the COS Vent Oxidizer (08-706) or during safety interlock of the system.**

*** These carbon adsorbers purify the carbon monoxide as it flows from the CO generators to the phosgene reactor. Without the purification, the carbon monoxide quality is not adequate to produce phosgene that is suitable for use in polycarbonate production. Downstream of the adsorbers is a chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide.

****

A.10 Boilerhouse I [Section K]

A.10.1 Boilerhouse I

Boilerhouse I Affected Facilities/Sources
BEFORE Shutdown of BW-BOILER and E BOILER

(a) ~~[Reserved]~~ **The Boilerhouse I area includes boilers that are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as: E BOILER, BW-BOILER, and R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to the E BOILER, BW-BOILER, and R BOILER are specified in Section D of this permit.**

SECTION K.1 AFTER Shutdown of BW-BOILER and E BOILER

(a) The Boilerhouse I area includes one boiler that is part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. This boiler is identified as: R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to R BOILER is specified in Section D of this permit.

BH I Boilers - BEFORE Shutdown of BW-BOILER and E BOILER

(b) The boilers located in the Boilerhouse I Area are identified as emission units below. Each

emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit[(d)(e)]	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
09-001	BW-BOILER	B&W BOILER natural gas-**fired** with/without supplemental hydrogen	None	None	173 MMBtu/hr	1975
09-002	E BOILER	ERIE BOILER coal **-**fired	BHI Baghouse	None	249 MMBtu/hr	1975
~~09-002~~	~~L BOILER~~	~~LASKER BOILER~~ ~~coal fired~~	~~BHI Baghouse~~	~~None~~	~~128.7 MMBtu/hr (design)~~	~~1962~~
09-106	R BOILER	RILEY BOILER natural gas fired	None	None	178.5 MMBtu/hr	1969

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).

(b) Equipment is integral to the process operation.

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(d) E **BOILER** ~~Boiler, L Boiler~~, BW-**BOILER** ~~Boiler,~~ and R **BOILER** ~~Boiler~~ may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a **gas** chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use the E **BOILER** ~~rie Boiler, Lasker Boiler~~, **BW BOILER** ~~B&W Boiler~~, or R **BOILER** ~~iley Boiler~~ for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either a~~n~~ **COS Oxidizer** ~~oxidizer~~ (08-706) or **COS Flare** ~~flare~~ (08-707). The **COS Oxidizer** ~~oxidizer~~ and **COS Flare** ~~flare~~ are described in Section I of this permit. The **COS Flare** ~~flare~~ (08-707) serves only as back-up to the **COS Oxidizer** ~~oxidizer~~ (08-706) ~~and~~ **or** during safety interlock of the system.

(e) E **BOILER** ~~Boiler~~, BW-**BOILER** ~~Boiler~~, and R B**OILER** ~~oiler~~ are used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to either the E **BOILER** ~~Boiler~~ or R **BOILER** ~~Boiler~~ for control. **After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.**

SECTION K.2 AFTER Shutdown of BW-BOILER and E BOILER

The boiler located in the Boilerhouse I is identified as an emissions unit below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit[(d)(e)]	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
09-106	**R BOILER**	**RILEY BOILER natural gas fired**	**None**	**None**	**178.5 MMBtu/hr**	**1969**

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) R BOILER may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a gas chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use R BOILER for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either a COS Oxidizer (08-706) or COS Flare (08-707). The COS Oxidizer and COS Flare are described in Section I of this permit. The COS Flare (08-707) serves only as back-up to the COS Oxidizer (08-706) or during safety interlock of the system.
(e) R BOILER is used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to R BOILER for control. After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.

BH I Storage and Heat Exchange Operations

(c) The storage and heat exchange operations located in the Boilerhouse I Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
~~09-003~~	~~NO.6 ST TK~~	~~NO.6 FUEL OIL STORAGE TANK~~	~~None~~	~~None~~	~~1,514 m^3~~	~~N/A~~
~~09-004~~	~~GSTA~~	~~UNLEADED GASOLINE STORAGE TANK VH-1~~	~~None~~	~~None~~	~~3.81 m^3~~	~~N/A~~
~~09-005~~	~~GST(L)~~	~~DIESEL-R STORAGE TANK VH-2~~	~~None~~	~~None~~	~~2.18 m^3~~	~~N/A~~
~~09-009~~	~~DST~~	~~DIESEL STORAGE TANK VH-3~~	~~None~~	~~None~~	~~2.13 m^3~~	~~N/A~~
~~09-100~~	~~F-CVCS-BH1~~	~~CENTRAL VACUUM SYSTEM~~	~~None~~	~~None~~	~~0.175 tons/hour~~	~~N/A~~
*****	**********	**********	*********	**********	*********	********
09-102	BH1 CTC2	COOLING TOWER #1 CELL B	None	None	N/A	N/A
~~09-114~~	~~FT FUEL TK~~	~~FIRE TRAINING GROUND FUEL TANK~~	~~None~~	~~None~~	~~4.16 m^3~~	~~N/A~~

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

A.11 Structured Products [Section L]

A.11.1 Structured Products, Building 4

Structured Products Affected Facilities/Sources

****

Structured Products Operations

(c) The Structured Products operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
09-001; 09-002; and 09-106	SHEETFUMES*	COATING LINES - C-41, C-42, S-4, S-5	**BEFORE Shutdown of the BW-BOILER AND E BOILER: BW-BOILER, E BOILER OR R BOILER-** ~~Boilers in~~ Section K **AFTER Shutdown of BW-BOILER and E BOILER: SHEETFUMES TO or R BOILER**	None	N/A	N/A
********	**********	**********	**********	*********	**********	**********
10-361	C-6	C-6 COATING LINE	None	None	N/A	N/A

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-010	EDV S5	EXTRUDER & DIE VENT S-5	None	None	1.70 tons/hour	N/A
**********	**********	**********	**********	**********	**********	********
10-341	DHE (S1)	S1 DIE HEAD EXHAUST	None	None	0.55 tons/hour	N/A
~~10-342~~	~~MWS~~	~~MWS EXTRUDER AND DIE~~	~~None~~	~~None~~	~~0.50 tons/hour~~	~~N/A~~

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
10-343	CPVP1-4	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
10-344	CPVP5-8	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
~~10-345~~	~~MWSAO~~	~~MWS ANNEALLING OVEN~~	~~None~~	~~None~~	~~0.50 tons/hour~~	~~N/A~~
~~10-346~~	~~MWSCO~~	~~MWS CURE OVEN~~	~~None~~	~~None~~	~~0.50 tons/hour~~	~~N/A~~
**********	**********	**********	*********	**********	**********	*********
10-348	P3	P3 VACUUM PUMP SILOS 1 & 2	None	Filter	0.10 tons/hour	N/A
10-~~TBD~~**362**	SAW CHIPS	S16 OQ SAW CHIP FILTER BAG	None	None	Less than 100 lbs/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* **BEFORE shutdown of BW-BOILER and E BOILER** ~~The~~ **the** SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S-4, and S-5. The boilers described in Section K of this permit, E **BOILER** ~~Boiler~~, **BW BOILER** and R **BOILER** ~~Boiler~~ are used for controlling VOC emissions from the SHEETFUMES stream.

**** AFTER shutdown of BW-BOILER and E BOILER, the SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S-4, and S-5. The boiler described in Section K of this permit, R BOILER, or SHEETFUMES TO, described in this Section, is used for controlling VOC emissions from the SHEETFUMES stream.**
*****

integral to the process), if present; the maximum process input rate; the date of construction; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

A.16 HPP ChemOps [Section Q]

A.16.1 HPP ChemOps, Buildings 58 and 59

HPP ChemOps Affected Facilities/Sources

(a) ~~[Reserved]~~ **The HPP ChemOps area includes process heaters, identified as H-900 and H-900B, which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-900 and H-900B are specified in Section D of this permit.**

****

HPP ChemOps Operations

(e) The HPP ChemOps operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices [(b)]	Maximum Capacity[(c)]	Date of Construct
13-042	V-500A[(f)]	DA HOLD TANK	None	None	57.5 m^3	1985
13-042	V-500B[(f)]	DA HOLD TANK	None	None	57.5 m^3	1985
*******	**********	**********	**********	**********	**********	*********

****

(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or ~~the~~ **The** maximum heat input rate.

****

A.18 Emergency Generators and Pumps [Section S]

A.18.1 Emergency Generators and Pumps, Entire Plant Site

Emergency Generators and Pumps

(a) The site generators and pumps listed below are considered the emergency generators and pumps identified as a group, 17-Emer-G. Each emergency generator or pump which is associated with this group is individually identified with an affiliated stack/vent I.D; plant location; date in which the emergency generator or pump was installed; rated horsepower (hp); and heat input.

****

Standby Energy Curtailment Generators and Mobile Diesel Units

(b) The generators and mobile diesel units listed below are considered the energy curtailment generators and mobile diesel units identified as a group, 17-S_M-G. Each energy curtailment generator or mobile diesel unit which is associated with this group is individually identified with an affiliated stack/vent I.D; plant location; date in which the energy curtailment generator or mobile diesel unit was installed; rated horsepower (hp); and heat input.

Stack / Vent I.D	Plant Location	Date Installed	Rated HP	MMBTU/hr
STANDBY ENERGY CURTAILMENT DIESEL GENERATORS AND MOBILE DIESEL UNITS				
17-116	CPP Resin III	1984	1580	11.2
17-117	CPP Resin III	1984	1580	11.2
17-118	WWTP Lift Station	1990	2220	15.7
17-119	WWTP Lift Station	1990	2220	15.7
~~17-125~~	~~Substation 2~~	~~1994~~	~~2161~~	~~15.3~~
~~17-126~~	~~Substation 2~~	~~1994~~	~~2161~~	~~15.3~~
~~17-127~~	~~Substation 2~~	~~1994~~	~~1503~~	~~10.6~~
~~17-131~~	~~Substation 1~~	~~1995~~	~~2161~~	~~15.3~~
~~17-132~~	~~Substation 1~~	~~1995~~	~~2161~~	~~15.3~~
~~17-133~~	~~Substation 1~~	~~1995~~	~~2161~~	~~15.3~~

****

A.21 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Space heaters, process heaters, or boilers using the following fuels:

(1) Natural gas fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(2) Propane or ~~liquified~~ **liquefied** petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.

(3) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.

A.22 Plant-MON [Section V]

A.22.1 Plant-MON Affected Facilities/Sources

(a) Plant-MON identifies the affected source subject to 40 CFR 63, Subpart FFFF. Plant-MON is the facility wide collection of MCPUs and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials specified in 40 CFR 63.2435(b)(1) that are not otherwise exempted from the requirements of 40 CFR 63, Subpart FFFF. An MCPU includes equipment necessary to operate the miscellaneous organic chemical manufacturing process, as defined in 40 CFR 63.2550, and includes assigned storage tanks and product transfer racks, equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater, and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in 40 CFR 63.2435(b)(1)(i) through (v). MCPUs subject to 40 CFR 63, Subpart FFFF are identified below:

****

A.22.2 Group 1 MON ~~Mon~~ Process Activities' Emission Limits and Work Practices

(a) Group 1 MON process activities that require emission limits or work practices in the affected source, Plant-MON, are identified below. Each process activity is identified with an MCPU, process activity, controlled by, ID and description.

****

A.23 COGEN [Section W]

A.23.1 COGEN AUX BOILER

(a) The natural gas-fired AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) as identified below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) This permit includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section W.1 of this permit.

(c) The COGEN Project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to an affected source, as defined pursuant to the NESHAP. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is a new affected source subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section D.1 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
19-002	AUX BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-004	AUX2 BOILER*	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-005	CG1 BOILER*	Natural gas-fired boiler with low-NOx burner	None	None	249 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
*** AUX2 BOILER and CG1 BOILER are part of the AOS in W.1.19.**

COGEN

(a) The natural gas-fired COGEN emission unit is located in the COGEN Area as identified below. COGEN consists of a natural gas-fired turbine and a heat recovery steam generator (HRSG) with duct burner. Each emission unit is identified with an

affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to the affected facility. COGEN is an affected facility pursuant to 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. The requirements of 40 CFR 60, Subpart KKKK, that are applicable to COGEN (including the HRSG with Duct Burner), are specified in this section of the permit. Because the requirements of 40 CFR 60, Subpart KKKK, apply to COGEN (including the HRSG with Duct Burner), the requirements of 40 CFR 60, Subpart Db, are not applicable to the Duct Burner.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the affected source. COGEN is an affected source pursuant to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The requirements of 40 CFR 63, Subpart YYYY, that are applicable to COGEN are specified in this section of the permit. Pursuant to 40 CFR 63.6095(d), Stay of standards for gas-fired subcategories, the COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

(d) Pursuant to the definitions contained in 40 CFR 63.7575, waste heat boilers are excluded from the definition of "boiler". Waste heat boilers are defined to include duct burners; therefore, the HRSG, a waste heat boiler with duct burner, is not considered an affected source pursuant to 40 CFR 63, Subpart DDDDD.

(e) Pursuant to 40 CFR 63.6092, the HRSG with duct burner is not considered an affected source pursuant to 40 CFR 63, Subpart YYYY.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).	Oxidation Catalyst	None	1,812 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

A.**24**~~23~~ Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

Change 2: Condition B.10 - Preventive Maintenance Plan has been updated due to the conversion of the coal fired boilers to natural gas fired boilers.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

(a) This permit, T129-**30384**~~6794~~-00002 is issued for a fixed term of five (5) years from the effective date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
****

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
****

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D - ~~V~~ **W** of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

B.10 Preventive Maintenance Plan [326 IAC 2 7 5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) as described in 326 IAC 1 6 3 within ninety (90) days after the effective date of this permit for the emission units and air pollution control devices listed in the table below:

Permit Section	Stack vent ID	Emission Unit/APCD	Description
D.2	01-101	NE BOILER	Natural gas-fired boiler
D.2	01-014	BW GAS	Natural gas-fired boiler
D.2	01-100	H BOILER	Natural gas-fired boiler
D.3 **Coal-fired (before conversion to natural gas-fired)**	01-001	BW1-BOILER/ Fabric Filter	Coal-fired boiler
D.3 **Coal-fired (before conversion to natural gas-fired)**	01-001	BW2-BOILER/ Fabric Filter	Coal-fired boiler
D.4 **Coal-fired (before conversion to natural gas-fired)**	01-006	BF-ASVB (Ash handling equipment)	Bag filter for ash handling
D.3 Natural gas-fired (after conversion to natural gas-fired)	**01-001**	**BW1-BOILER**	**Natural gas-fired**

Permit Section	Stack vent ID	Emission Unit/APCD	Description
D.3 Natural gas-fired (after conversion to natural gas-fired)	**01-001**	**BW2-BOILER**	**Natural gas-fired**
E.2	03-107	PhTCU	Thermal Combustion Unit
E.4	03-008	H-530A	Waste/Gas-fired boiler
E.4	03-008	H-530B	Waste/Gas-fired boiler
F.2	04-050	H-6060	BPA III Vent Incinerator
F.2	N/A	H-383/ Condenser	Tar Cracker Phenol Condenser
G.2	05-007	V-723	RESIN II Vent Gas Absorber
G.2	05-013	V-519	RESIN I AND II Vent Gas Absorber
I.1	08-001	C-966 Scrubber	C-966 Scrubber
I.1	08-001	C-967 Scrubber	C-967 Scrubber
I.2	08-706	COS Vent Oxidizer	COS Vent Oxidizer
I.2	08-707	COS Flare	COS Flare
L.2 After Startup of SHEETFUMES TO	**10-600**	**SHEETFUMES TO**	**SHEETFUMES Thermal Oxidizer**
K.2	09-002	E BOILER/ BH1 Baghouse	Coal-fired boiler
~~K.2~~	~~09-002~~	~~L BOILER/ BH1 Baghouse~~	~~Coal-fired boiler~~
K.2	09-001	BW-BOILER	Natural gas-fired boiler
K.2	09-106	R BOILER	Natural gas-fired boiler
N.3	12-560	V301/401SC	V301/401SC
Q.2	13-056	S-800/ Condenser 801C	JC-803, S-800 Toluene Sump
Q.2	13-062	Scrubber PI/MMA HD	Scrubber PI/MMA HD
Q.2	13-346	H-2100 Oxidizer	H-2100 Oxidizer
Q.2	13-365	V-750B/ C751B Condenser	Contaminated Toluene Tank
W.1	**19-002**	**AUX BOILER**	**Auxiliary boiler, natural gas-fired low-NOx burners**
W.2	**19-001**	**COGEN**	**1,812 MMBtu/hr stationary natural gas-fired combustion turbine includidng** a nominal 486 MMBtu/hr **natural gas-fired duct burner and heat recovery steam generator (HRSG).**
Note: After shutdown of the BW-BOILER and E BOILER in, rows that reference stack vent IDs 09-001 and 09-002 in Section K shall cease to apply.			

****

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

****

(b) In addition to the nonapplicability determinations set forth in Sections D – ~~U~~**W**, of this permit, IDEM, OAQ has also made the determinations regarding this source as listed in Attachment A.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T129-**30384**~~6794~~-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either

****

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions

is met:

****

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]

(1) The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(2) Backup fuel switches specifically addressed in, and limited under, Sections D - ~~V~~ **W** of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.26 Applicable Requirements

Many provisions in Sections D - W ~~V~~ of the permit contain references to a "permit condition" in **Attachment A:** Sections AA - **UU** ~~WW~~ **and Attachments C-F**, as well as a citation to a federal regulation in Title 40 of the Code of Federal Regulations. In each case, the applicable requirement is the federal regulation that is cited (version in effect as of the effective date of this permit, or as specifically updated in an amendment or renewal of this permit). The "permit conditions" in **Attachment A:** Sections AA - UU **and Attachments C-F** are not applicable requirements and are not enforceable; they are solely for informational purposes. The Permittee is not required to certify compliance with any provision in **Attachment A:** Sections AA - UU **and Attachments C-F**.

Change 3: New emission units have been added to Section D of the permit and the sub-conditions have also been added to the permit.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

Boilerhouse II Affected Facilities/Sources

This section lists the provisions of applicable **National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) standards, and** New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected facility or source subject to the applicable regulation.

(a) The affected facilities **at Boilerhouse II that are** subject to 40 CFR 60, Subpart Db are identified as NE BOILER, BW GAS, and H BOILER. The affected facility is a device which combusts any fuel or byproduct/waste to produce steam or to heat water or any other heat transfer medium, commences construction, modification, or reconstruction after June 19, 1984, and has a heat input capacity of greater than 100 million Btu per hour.

(b) **BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER**

The Boilerhouse II area includes boilers that are part of existing affected sources subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The "unit designed to burn coal/solid fuel subcategory" includes any boiler or process heater than burns any coal or other solid fossil fuel alone or at least 10 percent coal or other solid fossil fuel on an annual heat input basis in combination with liquid fuels, gaseous fuels, or less than 10 percent biomass and bio-based solids on an annual heat input basis.

The following emissions units constitute the existing affected source for the "unit designed to burn coal/solid fossil fuel subcategory": BW1-BOILER, BW2-BOILER, and E BOILER. For clarification purposes, E BOILER is located in Boilerhouse I, Section K of this Part 70 permit.

After the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and shutdown of E BOILER, the BW1-BOILER, BW2-BOILER, and E BOILER will no longer be part of the "unit designed to burn coal/solid fossil fuel subcategory."

(2) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic

testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW BOILER, R BOILER, H-390, H-109, H-900, H-900B, and H-520. For clarification purposes, R BOILER and BW BOILER are located in Boilerhouse I, Section K of this Part 70 permit; H-390 and H-109 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.

(b) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

The Boilerhouse II area includes boilers which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, and H BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in 40 CFR 63.7575. A new affected source subject to 40 CFR 63, Subpart DDDDD is each new or reconstructed industrial, commercial, or institutional boiler or process heater at a major source as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized below:

(1) The "unit designed to burn gas 1 subcategory" includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

The following emissions units constitute the existing affected source for the "unit designed to burn gas 1 subcategory": NE BOILER, BW GAS, H BOILER, BW1-BOILER, BW2-BOILER, R BOILER, H-390, H-109, H-900, H-900B, and H-520. For clarification purposes, R BOILER IS LOCATED IN Boilerhouse I, Section K of this Part 70 permit; H-390 and H-109 are in Section N; H-900 and H-900B are in Section Q; and H-520 is in Section E.
The following emissions units each constitute a new affected source for the "unit designed to burn gas 1 subcategory": AUX BOILER, and if the alternative operating scenario in W.1.19 is elected, AUX2 BOILER and CG1 BOILER (in Section W of this Part 70 permit.)

(2) [RESERVED}

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS [326 IAC 12] [40 CFR 60, Subpart A]

The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1, that apply to the affected facilities NE BOILER, BW GAS, and H BOILER.

****

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	NE **BOILER**~~B oiler~~	BW **GAS** ~~Gas~~	H **BOILER** ~~Boiler~~
60.11(a)	Compliance with standards and maintenance requirements	X	X	X
60.11(d)	Compliance with standards and maintenance requirements	X	X	X
60.13(a)	Monitoring requirements	X	X	X
60.13(b)	Monitoring requirements	X	X	X
60.13(c)	Monitoring requirements	X	X	X
60.13(d)	Monitoring requirements	X	X	X
60.13(e)	Monitoring requirements	X	X	X
60.13(f)	Monitoring requirements	X	X	X
60.13(g)	Monitoring requirements	X	X	X
60.13(h)	Monitoring requirements	X	X	X

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER;

D.1.2 ~~[Reserved]~~ **General Provisions Relating to NESHAP-"Unit Designed to Burn Coal/Solid Fuel Subcategory" [326 IAC 20-1] [40 CFR Part 63, Subpart A]**

(a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the "unit designed to burn coal/solid fuel subcategory" that constitutes an existing affected source, as designated by 40 CFR 63.7490(a)(1), except when otherwise specified in 40 CFR 63, Subpart DDDDD. The Permittee must comply with these requirements no later than January 31, 2016, except as provided in 40 CFR 63.6(i).

(b) Pursuant to IC 13-14-2-6 and in order to secure compliance with 40 CFR Part 63, Subpart DDDDD, the Permittee is subject to the Order of the Commissioner dated January 10, 2014.

(c) Pursuant to the Order, the Permittee shall comply with the standards set forth in 40 CFR 63, Subpart DDDDD for E BOILER (Section K), BW1-BOILER, and BW2-BOILER no later than January 31, 2017.

(d) Condition D.1.2 shall cease to apply after the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and after shutdown of E BOILER is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER;

D.1.2 [Reserved]

D.1.3 ~~[Reserved]~~ **General Provisions Relating to NESHAP- "Unit Designed to Burn Gas 1 Subcategory" [326 IAC 20-1] [IC 13-14-2-6] [40 CFR Part 63, Subpart A]**

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the "unit designated to burn gas 1 subcategory" that constitutes the existing affected source subject to 40 CFR 63, Subpart DDDDD, as set forth in 40 CFR 63.7490(a)(1). The Permittee must comply with these requirements by the later of January 31, 2016 or startup, as applicable.

D.1.4 ~~[Reserved]~~ **National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD] [IC 13-14-2-6]**

~~(a)~~ The existing affected sources, as specified in 40 CFR Part 63, Subpart DDDDD, are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR 63, Subpart DDDDD). Pursuant to 40 CFR Part 63.6(i)(9), the Permittee has made a demonstration sufficient to show that the existing coal-fired boilers (BW1-BOILER, BW2-BOILER, and E BOILER, Section K of this permit) shall have a one-year extension of the January 31, 2016 Subpart DDDDD compliance date, to and including January 31, 2017, for the standards set forth in 40 CFR Part 63, Subpart DDDDD, in accordance with the Order, dated January 10, 2014, from the Commissioner of IDEM.

(1) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER.

The following boilers in Boilerhouse II are part of the existing affected source for the "unit designed to burn coal/solid fossil fuel subcategory": BW1-BOILER and BW2-BOILER (boiler identified as E BOILER is also part of the "unit designed to burn coal/solid fossil fuel subcategory" and is located in Boilerhouse I, Section K of this Part 70 permit).
Pursuant to the Commissioner's Order dated January 10, 2014, the compliance date for the existing coal-fired boilers (BW1-BOILER, BW2-BOILER, and E BOILER, Section K of this permit) is January 31, 2017 for the standards set forth in 40 CFR Part 63, Subpart DDDDD. In accordance with the Permittee's extension request demonstration, BW1-BOILER, BW2-BOILER, and E BOILER shall cease to burn coal no later than January 31, 2017.

Condition D.1.4(a)(1) shall cease to apply after the conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only and after shutdown BW-BOILER and E BOILER is complete.

(1) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER [RESERVED]

(2) BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and BEFORE Shutdown of BW-BOILER and E BOILER.

The table that follows sets forth provisions of 40 CFR 63, Subpart DDDDD

standards that apply to the existing affected source for the "unit designed to burn gas 1 subcategory". The following units are part of this subcategory: NE BOILER, BW GAS, and H BOILER; R BOILER, located in Boilerhouse I, Section K of this Part 70 permit; process heaters H-390 and H-109 in Section N; H-900 and H-900B in Section Q; and H-520 in Section E.

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	BW-BOILER	E BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	H-390	H-109	H-900	H-900B	H-520
63.7480	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7485	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(a)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(d)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7495(b)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7495(d)						X	X	X	X	X	X	X	X
63.7499(a)	X	X											
63.7499(b)				X									
63.7499(l)			X		X	X	X	X	X	X	X	X	X
63.7500(a)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(a)(2)	X	X		X									
63.7500(a)(3)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(b)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(e)			X	X	X	X	X	X	X	X	X	X	X
63.7500(f)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7501	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7501(b)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7505(a)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7510(e)			X		X	X	X	X	X	X	X	X	X
63.7510(j)										X			
63.7515(d)			X		X	X	X	X	X	X	X	X	X
63.7521					X				X				
63.7521(f-i)					X				X				
63.7530(d-e)			X	X	X	X	X	X	X	X	X	X	X
63.7530(f)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7530(g)					X				X				
63.7540(a)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(2)(i)					X				X				
63.7540(a)(10)(i-v)			X		X	X	X	X	X	X	X	X	X
63.7540(a)(10)(vi)(A-C)			X		X	X	X	X	X	X	X	X	X
63.7540(a)(11)										X			
63.7540(a)(13)			X		X	X	X	X	X	X	X	X	X
63.7540(b)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(c)(1-4)					X				X				
63.7540(d)			X		X	X	X	X	X	X	X	X	X
63.7545(a)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(b)*	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(2 and 4)					X				X				

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	BW-BOILER	E BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	H-390	H-109	H-900	H-900B	H-520
63.7545(e)(6-7)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(8)(i-ii)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(f)(1-5)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(a)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(b)(1-4)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(2)					X				X				
63.7550(c)(5)(i-iv)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(5)(xiv and xvii)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(h)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(h)(3)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(a)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(a)(2)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7555(i and j)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7560(a-c)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7565	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7570(a)	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7570(b)(1-5)	X	X	X	X	X	X	X	X	X	X	X	X	X

*** Initial notification for indicated emission units was submitted May 16, 2013.**

(2) AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only and AFTER Shutdown of BW-BOILER and E BOILER

The table that follows sets forth provisions of 40 CFR 63, Subpart DDDDD that apply to the existing affected source and new affected source(s) for the "unit designed to burn gas 1 subcategory". The existing affected source is comprised of: BW1-BOILER, BW2-BOILER, NE BOILER, BW GAS, H BOILER; H-390 and H-109 located in Section N of this Part 70 permit; R BOILER in Section K; H-900 and H-900B in Section Q; H-520 in Section E; and, M-475, an existing process heater that is not in the current Part 70 permit. The new affected sources are: AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) located in Section W.

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	H-900	H-900B	H-520
63.7480	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7485	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7490(a)(1)	X	X	X	X	X	X				X	X	X	X	X
63.7490(a)(2)							X	X	X					
63.7490(b)							X	X	X					

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	BW1-BOILER	BW2-BOILER	R BOILER	NE BOILER	BW GAS	H BOILER	AUX BOILER	AUX2 BOILER*	CG1 BOILER*	H-390	H-109	H-900	H-900B	H-520
63.7490(d)	X	X		X	X	X				X	X	X	X	X
63.7495(a)			X				X	X	X					
63.7495(b)	X	X	X	X	X	X				X	X	X	X	X
63.7495(d)	X	X		X	X	X	X	X	X	X	X	X	X	X
63.7499(l)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(a)(1 and 3)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7500(e and f)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7501	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7505(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7510(e)	X	X	X	X	X	X				X	X	X	X	X
63.7510(g)			X				X	X	X					
63.7510(j)											X			
63.7515(d)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7521			X							X				
63.7521(f-i)			X							X				
63.7530(d and f)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7530(g)			X							X				
63.7540(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(2)(i)			X							X				
63.7540(a)(10)(i-v)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(10)(vi)(A-C)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(a)(11)			X								X			
63.7540(a)(13)	X	X		X	X	X	X	X	X	X	X	X	X	X
63.7540(b)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7540(c)(1-4)			X							X				
63.7540(d)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(b)**	X	X	X	X	X	X				X	X	X	X	X
63.7545(c)			X				X	X	X					
63.7545(e)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(2 and 4)			X							X				
63.7545(e)(6-7)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(e)(8)(i and ii)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(f)(1-5)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7545(h)(1-3)	X	X	X											
63.7550(a)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(b)(1-4)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(2)			X							X				
63.7550(c)(5)(i - iv)	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63.7550(c)(5)(xiv and xvii)	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Applicable 40 CFR Part 63, Subpart DDDDD Requirement	**BW1-BOILER**	**BW2-BOILER**	**R BOILER**	**NE BOILER**	**BW GAS**	**H BOILER**	**AUX BOILER**	**AUX2 BOILER***	**CG1 BOILER***	**H-390**	**H-109**	**H-900**	**H-900B**	**H-520**
63.7550(h)(1)			**X**							**X**				
63.7550(h)(3)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
63.7555(a)(1 - 2)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
63.7555(i and j)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
63.7560(a - c)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
63.7565	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
63.7570(a)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
63.7570(b)(1 - 5)	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
63.7575	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**

*** AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.**
**** Initial notification for indicated emission units was submitted May 16, 2013.**

(b) Definitions, as set forth in 40 CFR 63.7575, are applicable to the requirements established pursuant to 40 CFR 63, Subpart DDDDD.

Compliance Determination Requirements

D.1.5 Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 40 CFR 60, Subpart Db, compliance determination requirements for boilers NE BOILER, BW GAS, and H BOILER are identified in the following table:

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	NE**BOILE R** ~~Boiler~~	BW **GAS** ~~Gas~~	H **BOILER** ~~Boiler~~
II.3(c)	60.46b(c)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X
II.3(e)(4)	60.46b(e)(4)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6 Record Keeping and Reporting Requirements

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1, that apply to NE BOILER, BW GAS, and H BOILER.

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	NE **BOILER** ~~Boiler~~	BW **GAS** ~~Gas~~	H **BOILER** ~~Boiler~~
60.7(a)	Notification and record keeping	X	X	X
60.7(b)	Notification and record keeping	X	X	X
60.7(c)	Notification and record keeping	X	X	X
60.7(d)	Notification and record keeping	X	X	X
60.7(f)	Notification and record keeping	X	X	X
60.7(g)	Notification and record keeping	X	X	X

****

D.1.7 ~~[Reserved]~~ **National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Reporting Requirements[40 CFR 63, Subpart DDDDD][IC 13-14-2-6]**

(a) Pursuant to the Commissioner's Order dated January 10, 2014, the Permittee shall submit a status report within fifteen (15) days of completion of the following milestones indicating the actual dates of completion:

(1) The dates on-site construction of the installation of controls, consisting of the COGEN Project and natural gas pipeline extension identified in the technical support document (TSD) of this Part 70 permit, are initiated.

(2) The dates on-site construction of the installation of controls, consisting of the COGEN Project and natural gas pipeline extension, are completed.

(3) The dates by which final compliance with 40 CFR Part 63, Subpart DDDDD for the E BOILER (Section K), BW1-BOILER, and BW2-BOILER are achieved.

(b) The status reports required by Condition D.1.7(a) shall be submitted to:
Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

If submitted after the effective date of this Part 70 permit, the notification requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(35).

D.1.8 ~~[Reserved]~~ **Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5][IC 13-14-2-6]**

Pursuant to the Commissioner's Order, dated January 10, 2014, the Permittee is required to submit to IDEM, OAQ an application within twelve (12) months of the date of the Order for a significant permit modification of this Part 70 permit pursuant to 326 IAC 2-7-12 to add the compliance schedule requirements of the Order in D.1.7(a). This requirement has been satisfied by the application for permit amendment, SPM 129-34002-00002,

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

Natural Gas-fired boilers

(c) The three (3) natural ~~gas fired~~ **gas-fired** boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-101	NE BOILER	NEBRASKA BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1989
01-014	BW GAS	B&W #3 GAS BOILER natural gas-fired, low-NOx burners and flue gas recirculation	None	None	250 MMBtu/hr	1996
01-100	H BOILER	HOLMAN BOILER VENT natural gas-fired, low-NOx burners and flue gas recirculation	None	None	200 MMBtu/hr	1996

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Prevention of Significant Deterioration (PSD) and PSD Synthetic Minor Limits [326 IAC 2-2-3][326 IAC 2-2]

(a) Pursuant 326 IAC 2-2-3 and PSD (65) 1757, Operating Condition 4, issued on September 17, 1989 and revised through the Title V permit, the boiler identified as NE BOILER is limited to 0.12 pounds of NOx per million Btu of heat input using low NOx burners with staged combustion air and low excess air as Best Available Control Technology (BACT). Compliance with this BACT limit shall be determined on a ~~30 day~~ **30-day** rolling average basis, calculated consistent with 40 CFR 60.49b(g)(3).

****

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

~~**Coal/Natural Gas fired boilers**~~

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two (2) coal**-fired** and natural gas-fired boilers that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-001	BW1-BOILER	B&W #1 BOILER Coal-fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979
01-001	BW2-BOILER	B&W #2 BOILER Coal-fired (natural gas is used for igniter)	Fabric Filter	None	249 MMBtu/hr	1979

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emissions Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-fired Only

(d) The two boilers converted from coal-fired to natural gas-fired only that are located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-001	BW1-BOILER	B&W #1 BOILER Natural gas-fired only	None	None	249 MMBtu/hr	1979
01-001	BW2-BOILER	B&W #2 BOILER Natural gas-fired only	None	None	249 MMBtu/hr	1979

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-1]

Pursuant to 326 IAC 6-2-1(g) and PC (65) 2014, Condition (f), issued on January 23, 1978, particulate emissions shall be limited to 0.10 pounds per MMBtu of heat input for each of BW1-BOILER and BW2-BOILER.

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.2 Sulfur Dioxide (SO2) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1-2(a) and the following permit conditions: Condition (e) of PC (65) 2014, issued on January 23, 1978, Condition 5 of 65-01-94-0211, issued on March 23, 1990, and Condition 5 of 65-01-94-0212, issued on March 23, 1990, and as revised through the Title V permit, the SO2 emissions from the two (2) ~~coal fired~~ **coal-fired** boilers, identified as BW1-BOILER and BW2-BOILER shall each not exceed 2.19 pounds per million Btu (lbs/MMBtu).

Condition D.3.2 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.2 [Reserved]

D.3.3 ~~[Reserved]~~ **Prevention of Significant Deterioration Minor Limits (PSD) [326 IAC 2-2]**

(a) After conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only, the boilers' CO emissions are limited pursuant to Condition W.1.4(b).

(b) After conversion of BW1-BOILER and BW2-BOILER to natural gas-fired only, the boilers' VOC emissions are limited pursuant to Condition W.1.4(c).

Compliance Determination Requirements

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.4 Particulate Control [326 IAC 2-7-6(6)]

In order to demonstrate compliance with 326 IAC 6-2-1 and Condition D.3.1, the emissions from BW1-BOILER and BW2-BOILER shall be directed to the filters used for particulate control whenever the boilers are in operation.

Condition D.3.4 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.4 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.5 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 64]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2-7-5(3)(A)(ii), and 40 CFR 64, a continuous opacity monitoring system that meets the performance specifications of 326 IAC 3-5-2 shall be installed on the common stack for BW1-BOILER and BW2-BOILER and shall be calibrated, maintained, and operated for measuring opacity.

Condition D.3.5 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.5 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only

D.3.6 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

In order to demonstrate compliance with the SO2 limits pursuant to Condition D.3.2, the Permittee shall demonstrate, using a calendar month average, that the sulfur dioxide emissions do not exceed the equivalent of 2.19 pounds per MMBtu from the two (2) coal**-fired** and natural gas**-fired** ~~fired~~ boilers, identified as BW1-BOILER and BW2-BOILER when combusting coal. The Permittee may demonstrate such compliance by using one of the following methods pursuant to 326 IAC 7-2-1(c) and in accordance with procedures specified in 326 IAC 3-7:

(a) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data for BW1-BOILER and BW2-BOILER shall be collected as follows:

(1) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or

(2) Pursuant to 326 IAC 3-7-2(b)(2) and 326 IAC 3-7-3, manual or other non-ASTM automatic sampling and analysis procedures may be used upon a demonstration, submitted to the department for approval, that such procedures provide sulfur dioxide emission estimates representative either of estimates based on coal sampling and analysis procedures specified in 326 IAC 3-7-2 or of continuous emissions monitoring; or

(3) The Permittee shall meet the minimum sampling requirements specified in 326 IAC 3-7-2(b)(3), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e).

(b) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Condition D.3.6 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.6 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.7 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM testing for BW1-BOILER and BW2-BOILER utilizing methods as approved by the Commissioner. PM compliance demonstration testing shall be repeated at least once every three (3) years from the date of the previous compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Condition D.3.7 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.7 [Reserved]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.8 COM Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) In the event of a continuous opacity monitor (COM) opacity exceeding twenty percent (20%) average opacity for three (3) consecutive six (6) minute averaging periods, reasonable response steps shall be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below twenty percent (20%). Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) COM opacity readings in excess of twenty percent (20%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) The Permittee may request that the IDEM, OAQ approve a different opacity trigger level than the one specified in D.3.8(a) and (b), provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass

emission limits.

(d) Condition D.3.8 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.8 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.9 Method 9 Opacity Readings

(a) Whenever a COM is malfunctioning, the Permittee shall follow the procedures in accordance with Section C - Maintenance of Continuous Opacity Monitoring Equipment, until such time that the continuous opacity monitor is back in operation.

(b) Whenever a COM is malfunctioning, reasonable response steps shall be taken whenever the opacity from a boiler, measured by Method 9, exceeds twenty percent (20%) for any three (3) consecutive six (6) minute average periods. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) Condition D.3.9 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.9 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.10 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)][40 CFR 64]

(a) The Permittee shall record the pressure drop across each baghouse used in conjunction with BW1-BOILER and BW2-BOILER at least once per day when the boilers are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 12.0 inches of water or a range established based upon stack test data, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site.

(c) Condition D.3.10 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.10 [Reserved]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.11 Record Keeping Requirements

(a) To document the compliance status with the SO2 provisions in Conditions D.3.2 and

D.3.6, the Permittee shall maintain records of the information specified in (1) through (5) below. Records maintained for (1) through (5) shall be maintained on a monthly basis and shall be sufficient to establish compliance with the SO2 emission limits established in Condition D.3.2.

(1) Calendar dates covered in the compliance determination period; and
(2) Actual coal usage since last compliance determination period; and
(3) Sulfur content and heat content; and
(4) Sulfur dioxide emission rates; and
(5) Results of analysis of coal, or vendor analysis of coal and coal supplier certification.

(b) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) for BW1-BOILER and BW2-BOILER to be followed for sampling, handling, analysis, quality control, quality assurance, and date reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition any revision to the SOP shall be submitted to IDEM, OAQ.

(c) To document the compliance status with Conditions D.3.5 and D.3.8, the Permittee shall maintain records of the continuous opacity monitoring (COM) data in accordance with 326 IAC 3-5. Records shall be sufficient to establish compliance with the limits established in this section. When the COM system is not functioning, the Permittee shall maintain records of opacity readings of the stack exhaust, in accordance with Section C - Maintenance of Continuous Opacity Monitoring Equipment in order to document compliance with Condition D.3.9.

(d) To document the compliance status with Condition D.3.10, the Permittee shall maintain the daily record of the pressure drop readings across each baghouse required by Condition D.3.10. When a daily reading is not recorded, the Permittee shall maintain records of the reason for the lack of a pressure drop reading (e.g. the process did not operate during that day).

(e) All records required to be maintained by Condition D.3.11 shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

(f) Condition D.3.11 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.11 [Reserved]

BEFORE Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.12 Reporting Requirements

(a) A quarterly report of opacity exceedances shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A report containing the information specified in 326 IAC 3-5-7 may be used to fulfill this requirement. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(b) A quarterly report of the calendar month average coal sulfur content, coal heat content, and sulfur dioxide emission rate in pounds per million Btus for BW1-BOILER and BW2-BOILER and the total monthly coal consumption shall be submitted, not later than thirty (30) days following the end of each calendar quarter. [326 IAC 7-2-1(c)(2]

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(c) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

(1) Date of downtime.
(2) Time of commencement.
(3) Duration of each downtime.
(4) Reasons for each downtime.
(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

(d) The Permittee shall submit the reports and records required to be submitted by Condition D.3.12 to the address listed in Section C - General Reporting Requirements, of this permit.

(e) Condition D.3.12 shall cease to apply to BW1-BOILER and BW2-BOILER after their conversion to natural gas-fired only boilers is complete.

AFTER Conversion of BW1-BOILER and BW2-BOILER to Natural Gas-Fired Only
D.3.12 [Reserved]

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS - BEFORE Coal Ceases to be Transferred at Boilerhouse II

Emission Unit Description [326 IAC 2-7-5(15)]: Boilerhouse II, Building 2
Ash Handling - BEFORE Coal Ceases to Be Transferred at Boilerhouse II

(e) The ash handling equipment located in the Boilerhouse II Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-006	BF-ASVB	BAG FILTER FOR ASH HANDLING SYSTEM	None	Bagfilter	11.3 tons/hr	1979

Insignificant Activities [(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
01-005	TRDB	TRIPPER ROOM DUST BLOWER	None	None	30 tons/hr	N/A
01-007	ASVBF	ASH SILO BAG FILTER	Bagfilter*	None	11.3 tons/hr	N/A

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
d. Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))
* There are no control requirements required for the bagfilter associated with stack/vent ID 01-007 because uncontrolled emissions/hour are only about 10 percent of the allowable emissions for this emission unit.

Ash Handling - AFTER Coal Ceases to Be Transferred at Boilerhouse II
(e) **[RESERVED]**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from BF-ASVB, TRDB, and ASVBF shall not exceed the emission rate calculated using the following equation:

$$E = 4.10\ P^{0.67}$$

where E = rate of emission in pounds per hour;
and P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for these emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
01-006	BF-ASVB	11.3	20.8
01-005	TRDB	30.0	40.0
01-007	ASVBF	11.3	20.8

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. If the process weight rate for any of these emission units becomes 100 pounds per hour or greater, such unit shall be limited pursuant to the applicable equation in 326 IAC 6-3-2(e)(3).

(c) Condition D.4.1 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF-ASVB, TRDB and AVBF cease operation.

Compliance Determination Requirements

D.4.2 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with 326 IAC 6-3-2 and Condition D.4.1, the bagfilter associated with the facility BF-ASVB shall be in operation at all times that material is being transferred into the facility.

Condition D.4.2 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF ASVB, TRDB and AVBF cease operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.3 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the stack exhaust from the filter associated with BF-ASVB (01-006) shall be performed once per week during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhaust from the filter associated with BF-ASVB, the Permittee shall take reasonable response steps An observation of abnormal emissions that does not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(f) Condition D.4.3 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF ASVB, TRDB and AVBF cease operation.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.3, the Permittee shall maintain the weekly record of the visible emission notations required by Condition D.4.3(a). When a weekly record of normal or abnormal is not recorded, the Permittee shall include in its

records the reason for the lack of a visible emission notation (e.g. the process did not operate during normal daylight hours or the unit did not operate during the week).

(b) All records required to be maintained by Condition D.4.4 shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

(c) Condition D.4.4 shall cease to apply after coal is no longer transferred at Boilerhouse II and BF ASVB, TRDB and AVBF cease operation.

.

SECTION D.4 AFTER Coal Ceases to Be Transferred to Boilerhouse II
EMISSIONS UNIT OPERATION CONDITIONS [RESERVED]

Section D consists of the following Sections: D.1, D.2, D.3, D.4, two (2) Part 70 Usage Reporting Forms, and two (2) Part 70 Quarterly Reporting Forms. **Condition D.4.4 concludes the Section D requirements of this permit** **Reporting forms immediately follow.**

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.2.1(b)
Facility: Vent 01-014; BW GAS
Parameter: NOx
Limit: 39 tons per 365 days rolled on a daily basis and 0.20 lb/MMBtu

Month: _____ **Year:** _____

Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-**day** Rolling Total (Tons)	Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-**day** Rolling Total (Tons)
1					17				
2					18				
3					19				
4					20				
5					21				
6					22				
7					23				
8					24				
9					25				
10					26				
11					27				
12					28				
13					29				
14					30				
15					31				
16					no. of deviations				

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on:
Submitted by:

Title / Position:

Signature:

Date:

Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.2.1(c)
Facility: Vent 01-100; H BOILER
Parameter: NOx
Limit: 39 tons per 365 days rolled on a daily basis and 0.20 lb/MMBtu

Month: _____ **Year:** _____

Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-**day** Rolling Total (Tons)	Day	Natural Gas Used (Mscf)	Avg. NOx (lb/MMBtu)	NOx Emitted Today (Tons)	365-**day** Rolling Total (Tons)
1					17				
2					18				
3					19				
4					20				
5					21				
6					22				
7					23				
8					24				
9					25				
10					26				
11					27				
12					28				
13					29				
14					30				
15					31				
16					no. of deviations				

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on:
Submitted by:

Title / Position:

Signature:

Date:

Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.3.2 **- This condition will cease to apply after BW1- BOILER permanently ceases burning coal.**
Facility: Vent 01-001, BW1-BOILER
Parameter: SO2
Limits: 2.19 lbs SO2 per million Btu heat input

Year: _____ **Quarter:** _____

Month	Sulfur Content (%)	Coal Heat Content (Btu/lb)	Coal usage (ton/month)	SO_2 Emissions (lb/MMBTU)

☐ No deviation occurred in this **reporting period** ~~month~~.

☐ Deviation/s occurred in this month **reporting period** ~~month~~.
Deviation has been reported on:

Submitted by:

Title / Position:

Signature:

Date:

Phone:

This form will cease to apply after BW1-BOILER permanently ceases burning coal.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition D.3.2 **- This condition will cease to apply after BW1-BOILER permanently ceases burning coal.**
Facility: Vent 01-001, BW2-BOILER
Parameter: SO2
Limits: 2.19 lbs SO2 per million Btu heat input

Year: _____ Quarter: _____

Month	Sulfur Content (%)	Coal Heat Content (Btu/lb)	Coal usage (ton/month)	SO2 Emissions (lb/MMBTU)

☐ No deviation occurred in this ~~month~~ **reporting period**.

☐ Deviation/s occurred in this ~~month~~ **reporting period**.
Deviation has been reported on:

Submitted by:

Title / Position:

Signature:

Date:

Phone:

This form will cease to apply after BW2-BOILER permanently ceases burning coal.

Change 4: New conditions from 40 CFR 63, Subpart DDDDD have been added to Section E of the permit accordingly.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42
Phenol Affected Facilities/Sources
This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the entire affected source or affected facility subject to the applicable regulation.
****

(f) ~~[Reserved]~~ **The Phenol area includes a process heater, identified as H-520, which is part of an existing affected source (unit designed to burn gas 1 subcategory) subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to H-520 are specified in Section D.1 of this permit.**

(g) The Phenol Area includes a miscellaneous organic chemical manufacturing unit (MCPU) which is part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing unit is identified as PhMON_PCP. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials in 40 CFR 63.2435(b)(1) that are not otherwise exempted from requirements of 40 CFR 63, Subpart FFFF. MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to PhMON_PCP are specified in Section V of this permit.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]
****

E.1.5 ~~[Reserved]~~ **National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]**

The requirements of 40 CFR Part 63, Subpart DDDDD apply to the H-520 process heater as specified in Section D.1 of this permit.

****

SECTION E.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42
Phenol Hazardous Waste Boilers

****

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
03-008	H-530A*	LIQUID WASTE RESIDUE/GAS FIRED BOILER	None	None	75 mmBtu/hr	1979
03-008	H-530B*	LIQUID WASTE RESIDUE/GAS FIRED	None	None	75 mmBtu/hr	1982

Emissions Unit Description [326 IAC 2-7-5(15)]: Phenol, Buildings 40 and 42
Phenol Hazardous Waste Boilers

****

Significant Activities [(a)]

		BOILER				

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

*H-530A and H-530B are each an affected source subject to 40 CFR 63, Subpart EEE and are defined as hazardous waste liquid fuel boilers pursuant to 40 CFR 63.1201. Applicable Subpart EEE requirements are set forth in Section E.10.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

BEFORE Shutdown of E BOILER in Boilerhouse I

E.4.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Pursuant to PC (65) 1517, Condition 1, issued on May 3, 1982, the emissions of sulfur dioxide from the H-530B boiler shall be limited to 0.37 pounds per mmBtu and 120 tons per year.

(b) Pursuant to PC (65) 1517, Condition 2, issued on May 3, 1982, the emissions of nitrogen oxides from the H-530B boiler shall be limited to 0.40 pounds per mmBtu and 140 tons per year.

Compliance with these limits and the 325,000 pounds **per hour** total steam production limit for the ~~Lasker, and Erie~~ **E BOILER** ~~boilers~~ pursuant to CP 129-5500, Condition 13 issued on September 30, 1996 as stated in Condition K.2.1(b) limits the net increase in sulfur dioxide emissions and nitrogen oxide emissions to below 40 tons per year and renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

Condition E.4.1 shall cease to apply after the shutdown of E BOILER in Boilerhouse I is complete.

AFTER Shutdown of E BOILER in Boilerhouse I

E.4.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) Pursuant to PC (65) 1517, Condition 1, issued on May 3, 1982, the emissions of sulfur dioxide from the H-530B boiler shall be limited to 0.37 pounds per mmBtu and 120 tons per year.

(b) Pursuant to PC (65) 1517, Condition 2, issued on May 3, 1982, the emissions of nitrogen oxides from the H-530B boiler shall be limited to 0.40 pounds per mmBtu and 140 tons per year.

****

Change 5: Condition G.2.1- Prevention of Significant Deterioration (PSD) Minor Modification Limit and G.3.1- Prevention of Significant Deterioration (PSD) Minor Modification Limit have been updated in the permit accordingly.

SECTION G.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: LEXAN# Resin, Buildings 14 and 16

LEXAN# Resin Process Operations

(c) The LEXAN# Resin process operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
05-007	V-723	RESIN II VENT GAS ABSORBER	None	V-723 is a recovery device	35.82 tons/hour	1991
********	*********	**********	********	**********	*********	*******
05-159	F-5786	HI HEAT SURGE BIN SYSTEM	None	Bagfilter	7.5 tons/hour	N/A

****

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit:

(a) Emission units V-723 and V-519 are limited as shown in the table below or by the rate determined in the most recent stack test such that the total VOC emissions from V-723 and V-519, and **from** the COS stream which is described in both Section I.2 and Section K.2 of this permit**,** shall not exceed 55.0 tons per year and the emissions from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the emission units included in Sections G.3, H.2, I.1, I.2, I.3, and J.1) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the resin vent gas absorbers identified as V-723 and V-519, the COS stream, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

****

All references to K.2 in G.2.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.

****

SECTION G.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: LEXAN# Resin, Buildings 14 and 16

LEXAN# Resin Area Tanks

(d) Tanks located in the LEXAN # Resin Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum tank volume capacity, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
05-005	V-706	V-706 STORAGE TANK WITH SCRUBBER*	None	None	22.7 m^3	1970
**********	**********	**********	**********	*********	**********	******
N/A	V-711B	RECYCLE SOLVENT STORAGE TANK	None	None	75.7 m^3	N/A

Insignificant Activities[(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
*********	**********	**********	**********	*********	**********	********
05-160	F-5787	HIGH HEAT MIXING TANK	None	None	22.3 m^3	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Scrubber not required by any air regulation requirements.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

G.3.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission unit V-706, and from the emission units included in Conditions G.2.1(b), H.2.1, I.1.1, I.3.1 and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this and Conditions G.2.1, H.2.1, I.1.1, I.2.1, I.3.1, J.1.1, and K.2.1(a)(2)~~)~~ ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

All references to K.2.1(a)(2) in G.3.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.

****

Change 6: Condition H.2.1- Prevention of Significant Deterioration (PSD) Minor Modification Limit has been updated in the permit accordingly.

SECTION H.1 [RESERVED]

SECTION H.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Brine Recovery, Building 32

Brine Recovery Operations

(b) The Brine Recovery operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
06-008	V-70-4C	HCL SYNTHESIS SCRUBBER TOWER VENT (V70-10)*	None	None	N/A	N/A

Insignificant Activities[(d)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
06-006	V70-2	HCL TANK TRUCK TRANSFER AND STORAGE VENT SCRUBBER (V70-2)*	None	None	N/A	N/A
06-010	V20-5	BRINE SURGE TANK (V20-5)	None	None	N/A	N/A
06-011	ACID SUMP	ACID SUMP	None	None	N/A	N/A
06-012	V20-7	ACID BRINE STRIPPER (V20-7)	None	None	N/A	N/A
06-035	V-53-1	ENCLOSURE VENTILATION SCRUBBER (EVS) (V53-1)**	None	None	N/A	N/A
06-055	V20-21	RAW BRINE STORAGE TANK (V20-21)	None	None	N/A	N/A
06-058	V70-3	HCL RAILCAR LOADING STATION WITH SCRUBBER (V70-3)*	None	None	N/A	N/A
06-061	V20-17A	NORTH COOLING POND (V20-17A)	None	None	N/A	N/A
06-062	V20-17B	SOUTH COOLING POND (V20-17B)	None	None	N/A	N/A
06-064	V20-15B	ACIDIFICATION/DEGASSING TANK (V20-15B)	None	None	N/A	N/A
06-067	V53-2A	ENCLOSURE VENTILATION SCRUBBER (EVS) CIRCULATION TANK (V53-2A)	None	None	N/A	N/A
06-068	V53-2B	ENCLOSURE VENTILATION SCRUBBER (EVS) CIRCULATION TANK (V53-2B)	None	None	N/A	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* Scrubber controls hydrogen chloride fumes and is not required by any air regulation requirements.

** V-53-1 is a scrubber used to contain and destroy fugitive or accidental releases of chlorine gas that may occur inside the chlorine enclosure area of the brine recovery operations. This scrubber is a safety system integral to process operations and is not considered a control or recovery device.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

H.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission unit V20-7, and from the emission units included in Conditions G.2.1(b), G.3.1, I.1.1, I.3.1, and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, I.1.1, I.2.1, I.3.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

All references to K.2.1(a)(2) in H.2.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.

Section H consists of the following Sections: H.1, and H.2.

Condition H.2.1 concludes the Section H requirements of this permit

****

Change 7: Few conditions in Section I have been revised or updated in the permit.

SECTION I.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Phosgene, Building 6
Phosgene Affected Facilities/Sources

(a) ***************

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
*********	**********	**************\

the Title V permit, any change or modification which increases the total VOC emissions from emission units F-972, F-901, F-902, and from the emission units included in Conditions G.2.1(b), G.3.1, H.2.1, I.3.1, and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, H.2.1, I.2.1, I.3.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.
****

SECTION I.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Phosgene, Building 6
Phosgene Carbon Monoxide Generators and COS (Carbonyl Sulfide) Stream

(b) **********

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit[*]	Emission Unit Description	Air Pollution Control Devices[**]	Integral Devices[(b) ***]	Maximum Capacity[(c)]	Date of Construct
********	**********	**********	**********	*********	**********	*****
08-711	V-961B	F-961B BAGHOUSE RECEIVER	None	None	N/A	2006

****

* The 16 CO generators operate in a continuous mode and the CO produced by the generators is normally routed through the purification system and into the phosgene reactor. Each of the 16 generators has a stack/vent that is only used during startup, shutdown, and malfunction events.

** **BEFORE Shutdown of E BOILER and BW-BOILER -** In addition to having the option to use the **COS Vent** Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either the ~~Erie Boiler, Lasker Boiler~~ **E BOILER**, ~~B&W~~ **BW BOILER** ~~Boiler~~, and/or R **BOILER** ~~iley Boiler~~. These boilers are described in Section K of this permit. The COS Flare (08-707) only serves as a back-up to the COS Vent Oxidizer (08-706) or during safety interlock of the system.

~~All references to Section K in I.2 footnote ** shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.~~

**** AFTER Shutdown of E BOILER and BW-BOILER- In addition to having the option to use the COS Vent Oxidizer (08-706) for controlling organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to R BOILER. This boiler is described in Section K of this permit. The COS Flare (08-707) only serves as a back-up to the COS Vent Oxidizer (08-706) or during safety interlock of the system.**

*** **********

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

I.2.1 **BEFORE Shutdown of BW-BOILER and E BOILER -** Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boilers listed in Condition K.2.1 (E **BOILER,** ~~Boiler,~~ ~~L Boiler,~~ BW-**BOILER** ~~Boiler~~, and/or R **BOILER** ~~Boiler~~).

(a) The total sulfur input to the carbon monoxide generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16 and the coal-fired boiler~~s~~ (E BOILER ~~and L BOILER~~) listed in Condition K.2.1(a)(1) shall not exceed 2,536.75 tons in any 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

*Daily Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke) + Daily Coal Usage * (wt% Sulfur of Coal)*

(b) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour or the rate determined in the most recent stack test of the E BOILER ~~or L BOILER~~ such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent absorbers identified as V-723 and V-519, and the emission units included in Conditions G.2, G.3, H.2, I.1, I.3, J.1, and K.2) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.3, J.1, and K.2 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

(c) Whenever the carbonyl sulfide stream, COS is being vented to the COS Vent Oxidizer for the destruction of organic sulfides, the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

*Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)*

Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

(d) Whenever the carbonyl sulfide stream, COS is being vented to the COS Flare for the destruction of organic sulfides (used only as a back-up to the COS Vent Oxidizer **or** ~~and~~ during safety interlock of the system), the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

*Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)*

Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

Compliance with these conditions and Conditions G.2.1 and K.2.1(a) will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons per year each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

I.2.1 AFTER Shutdown of BW-BOILER and E BOILER Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as

COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boiler listed in Condition K.2.1 (R BOILER).

(a) The total sulfur input to the carbon monoxide generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16 shall not exceed 928.65 tons in any 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

Daily Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)

(b) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent absorbers identified as V-723 and V-519, and the emission units included in Conditions G.2, G.3, H.2, I.1, I.3, and J.1) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

(c) Whenever the carbonyl sulfide stream, COS is being vented to the COS Vent Oxidizer for the destruction of organic sulfides, the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis.
The sulfur inputs shall be determined according to the following equation:

Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)

Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

(d) Whenever the carbonyl sulfide stream, COS is being vented to the COS Flare for the destruction of organic sulfides (used only as a back-up to the COS Vent Oxidizer or during safety interlock of the system), the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis.
The sulfur inputs shall be determined according to the following equation:
Daily Coke Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke)
Note: Sulfur input limit assumes 100% conversion of sulfur in coke to organic sulfides.

Compliance with these conditions and Conditions G.2.1 and K.2.1(a) will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons per year each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

I.2.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16 shall not exceed the rates calculated using the following equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for these emission units and the allowable rate of emissions calculated for that process weight rate. The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
08-010	COG1	0.17	1.25
08-011	COG2	0.17	1.25
08-012	COG3	0.17	1.25
08-013	COG4	0.17	1.25
08-014	COG5	0.17	1.25
08-015	COG6	0.17	1.25
08-016	COG7	0.17	1.25
08-017	COG8	0.17	1.25
08-018	COG9	0.17	1.25
08-019	COG10	0.17	1.25
08-020	COG11	0.17	1.25
08-021	COG12	0.17	1.25
08-022	COG13	0.17	1.25
08-023	COG14	0.17	1.25
08-024	COG15	0.17	1.25
08-025	COG16	0.17	1.25

Compliance Determination Requirements

I.2.3 **BEFORE Shutdown of BW- BOILER and E BOILER -** Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boilers listed in Condition K.2.1 (E **BOILER** ~~Boiler~~, ~~L Boiler,~~ BW **BOILER** ~~Boiler,~~ and/or R **BOILER** ~~Boiler~~).

(a) In order to comply with Condition I.2.1, at least one of the control devices used for organic sulfide control (COS Vent Oxidizer~~,~~ **or** COS Flare**;** or E BOILER, ~~L BOILER,~~ BW-BOILER, or R BOILER**,** described in Section K) shall be in operation and control organic sulfide emissions from the COS stream at all times any of the carbon monoxide adsorbers are being regenerated.

(b) To determine compliance with Condition I.2.1(a):

(1) The sulfur content of the coke used in the carbon monoxide generators shall be analyzed daily as received (vendor delivery analysis may be used, approved by IDEM on 8/1/05) for each day the carbon monoxide generators operate; and

(2) The sulfur content of the coal used by ~~L BOILER and~~ E BOILER described in

Condition K.2.1(a)(1) shall be analyzed daily (the sulfur content determined pursuant to condition K.2.11(b) may be used).

(c) To determine compliance with Condition I.2.1(b) and whenever the COS stream is vented to ~~two or more of the three types of control devices permitted for use~~ **at least two types of control devices permitted for use** (**the COS** ~~oxidizer~~ **Oxidizer** and **COS Flare** ~~flare~~ described in this section; or boilers as described in Section K) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the E BOILER ~~or L BOILER~~ equal~~s~~:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the E BOILER ~~or L BOILER~~) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal~~s~~:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of **COS Vent Oxidizer** ~~oxidizer~~ as determined in the most recent stack test)*

(C) Daily VOC emissions from the **COS** Flare equal~~s~~:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)*

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to **at least** two ~~or more of the three~~ types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by E BOILER ~~or L BOILER~~, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the E BOILER ~~or L BOILER~~, multiplied by the number of hours the organic sulfides were vented to the E BOILER ~~or L BOILER~~; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the **COS** Flare, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the **COS** Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day

shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

(d) The gas chromatograph (GC) (also known as the sulfur GC) shall operate as follows:

****

I.2.3 AFTER Shutdown of BW-BOILER and E BOILER - Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the Carbon Monoxide Generators identified as COG1, COG2, COG3, COG4, COG5, COG6, COG7, COG8, COG9, COG10, COG11, COG12, COG13, COG14, COG15, and COG16; the oxidizer identified as COS Vent Oxidizer; the flare identified as COS Flare; and the boiler listed in Condition K.2.1 (R BOILER).

(a) In order to comply with Condition I.2.1, at least one of the control devices used for organic sulfide control (COS Vent Oxidizer or COS Flare; or R BOILER, described in Section K) shall be in operation and control organic sulfide emissions from the COS stream at all times any of the carbon monoxide adsorbers are being regenerated.

(b) To determine compliance with Condition I.2.1(a):

(1) The sulfur content of the coke used in the carbon monoxide generators shall be analyzed daily as received (vendor delivery analysis may be used, approved by IDEM on 8/1/05) for each day the carbon monoxide generators operate; and

(2) [RESERVED]

(c) To determine compliance with Condition I.2.1(b) and whenever the COS stream is vented to at least two types of control devices permitted for use (COS Oxidizer and COS Flare described in this section; or R BOILER described in Section K) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the R BOILER equal:

(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the R BOILER) * (24 hours per day)

(B) Daily VOC emissions from the COS Vent Oxidizer equal~~s~~:

Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of COS Vent Oxidizer as determined in the most recent stack test)

(C) Daily VOC emissions from the COS Flare equal~~s~~:

Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of

organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to at least two types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by R BOILER, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the R BOILER, multiplied by the number of hours the organic sulfides were vented to the R BOILER; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the COS Flare, the value for a day's VOC emissions calculated pursuant to Condition I.2.3(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

(d) The gas chromatograph (GC) (also known as the sulfur GC) shall operate as follows:

(1) The GC shall operate during all periods of operation of the carbon monoxide generators except for GC breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(2) At such time that the GC detects carbonyl sulfide at a level of 150 ppmv, carbon disulfide at a level of 10 ppmv, or hydrogen sulfide at a level of 50 ppmv in the carbon monoxide stream from the carbon adsorber, the appropriate carbon adsorber shall be taken off-line immediately and the carbon monoxide feed shall be sent to another carbon adsorber.

I.2.4 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]
****

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

I.2.5 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream
(a) **********

(b) When the COS stream is being vented to the COS Flare to control organic sulfides emissions from the LEXAN# production facility, the presence of a flare pilot flame (for COS **Flare** ~~flare~~) shall be monitored using a thermocouple or any other equivalent device, to detect the presence of a flame and to sound an alarm when the flame is not detected.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

I.2.6 **BEFORE Shutdown of BW- BOILER and E BOILER -** Record Keeping Requirements

(a) To document the compliance status with Conditions I.2.1 and I.2.3 the Permittee shall maintain the following records:

(1) Identity of each type of control device (oxidizer or flare, or boilers as described in Section K) to which the COS stream is vented for Organic Sulfide control and the amount of time during a calendar day that the type of control device is in use, except failure to maintain such records and calculating compliance pursuant to Condition I.2.3(c)(3) shall not be a deviation from this requirement.

(2) The total daily sulfur input, and the 365-day rolling total of total daily sulfur input, to the E BOILER ~~and L BOILER~~, and carbon monoxide generators.

(3) Daily analyses of sulfur content of coke received for use by the carbon monoxide generators.

(4) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition I.2.3(c).

.

(6) The measured operating temperature of the ~~LEXAN#~~ COS Vent Oxidizer during periods when used as an organic sulfides control device.

(7) Records of flame presence at the ~~LEXAN#~~ COS Flare during periods when used as an organic sulfides control device.

(d) All records required to be maintained by Condition I.2.6 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

I.2.6 AFTER Shutdown of BW-BOILER and E BOILER Record Keeping Requirements

(a) To document the compliance status with Conditions I.2.1 and I.2.3 the Permittee shall maintain the following records:

(1) Identity of each type of control device (oxidizer or flare, or R BOILER as described in Section K) to which the COS stream is vented for Organic Sulfide control and the amount of time during a calendar day that the type of control device is in use, except failure to maintain such records and calculating compliance pursuant to Condition I.2.3(c)(3) shall not be a deviation from this requirement.

(2) [RESERVED]

(3) Daily analyses of sulfur content of coke received for use by the carbon

monoxide generators.

(4) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition I.2.3(c).

.

(6) The measured operating temperature of the COS Vent Oxidizer during periods when used as an organic sulfides control device.

(7) Records of flame presence at the COS Flare during periods when used as an organic sulfides control device.

(d) All records required to be maintained by Condition I.2.6 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

I.2.7 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition I.2.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition. [The reporting form for documenting compliance with Condition I.2.1(b) is located at the end of Section K of this permit]

SECTION I.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Phosgene, Building 6

Phosgene Heat Exchange System and Area Waste

(c) The Phosgene heat exchange system includes cooling towers identified as PHG CTC1, PHG CTC2, PHG CTC3, PHG CTC4, PHG CTC5, PHG CTC6, PHG CTC7, PHG CTC8.

(d) [Reserved]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

I.3.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission units PHG CTC1, PHG CTC2, PHG CTC3, PHG CTC4, PHG CTC5, PHG CTC6, and

from the emission units included in Conditions G.2.1(b), G.3.1, H.2.1, I.1.1, and J.1.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, H.2.1, I.1.1, I.2.1, J.1.1, and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.
****

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Usage Report

(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition I.2.1(a) - **This condition will cease to apply after shutdown of E BOILER.**
Facility: CO Generators
Parameter: SO2
Limit: The overall total sulfur input to the carbon monoxide generators and the coal-fired boilers listed in Condition K.2.1(a)(1) shall not exceed 2,536.75 tons in any 365-day period, rolled on a daily basis.

Year: _____Month: _____

Day	Sulfur input this day (tons/day)	Sulfur input for the last 365-day period (tons)	Day	Sulfur input this day (tons/day)	Sulfur input for the last 365-day period (tons)
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			no. of deviations		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

This form will cease to apply after shutdown of E BOILER.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Usage Report
(Submit Report Quarterly)

Source Name:	SABIC Innovative Plastics Mt. Vernon, LLC
Source Address:	1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.:	T129-30384-00002 Condition I.2.1**(a),** (c)**,** and (d)
Facility:	CO Generators
Parameter:	~~SO2~~ **Sulfur input (VOC and SO2 limits)**
Limit:	When using the COS Vent Oxidizer or the COS **Flare** ~~flare~~, the total sulfur input to the carbon monoxide generators shall be limited to 928.65 tons per 365-day period, rolled on a daily basis.

Year: _____Month: _____

Day	Sulfur Input this day (ton/day)	Sulfur Input for the last 365-day period	Day	Sulfur Input this day (ton/day)	Sulfur Input for the last 365-day period
1			**17**		
2			**18**		
3			**19**		
4			**20**		
5			**21**		
6			**22**		
7			**23**		
8			**24**		
9			**25**		
10			**26**		
11			**27**		
12			**28**		
13			**29**		
14			**30**		
15			**31**		
16			**no. of deviations**		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on:
Submitted by:
Title / Position:
Signature:
Date:
Phone:

Change 8: Condition J.1.1- Prevention of Significant Deterioration (PSD) Minor Modification Limit has been updated in the permit accordingly.

SECTION J.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: LEXAN# Finishing, Building 13

LEXAN# Finishing Operations

(a) The LEXAN# Finishing operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

****

Significant Activities[(a)]

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

J.1.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

Pursuant to SSM 129-14373-00002, Condition D.1.1, issued on May 9, 2002, as revised through the Title V permit, any change or modification which increases the total VOC emissions from emission units SILO 67, SILO 68, SILO 69, M&N DUST, SP1-BF, SPA-BF, SPB-BF, SILO 57 RH, SILO 58 RH, L-28 RH, L-27 RH, L-26 RH, L-25 RH, L-24 RH, L-23 RH, L-22 RH, L-21 RH, L-20 RH, SILO 59 RH, SILO 60 RH, SILO 61 RH, SILO 62 RH, L-10 BV, L-11 BV, L-13 BV, L-14 BV, L16ED, L-15 RH, L-16 RH, L-17 RH, L13ED, L17ED, L15ED, L14ED, L27ED, L10ED, L11ED, L12ED, L26ED, L24ED, L23ED, L25ED, L22ED, L21ED, L20ED, SILO 64, SILO 65, SILO 66, SP2-BF, SP3-BF, L28ED, L29ED, L30ED, L31ED, L-29 RH, L-30 RH, L-31 RH, and from the emission units included in Conditions G.2.1, G.3.1, H.2.1, I.1.1, and I.3.1 of this Part 70 permit, to 25.0 tons per year or greater must receive prior approval from IDEM, OAQ. Compliance with this Condition and Conditions G.2.1, G.3.1, H.2.1, I.1.1, I.2.1, I.3.1 and K.2.1(a)(2)) ensures that the total VOC emissions of the emission units involved in the 1995 and 1996 resin expansion project are less than 80.0 tons per year, the net emission increase from the 1995 and 1996 resin expansion project is less than 40 tons per year, and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration not applicable.

All references to condition K.2.1(a)(2) in J.1.1 shall cease to apply after the shutdown of the boilers in Boilerhouse I is complete.

****

Change 9: New conditions from 40 CFR 63, Subpart DDDDD have been added to Section K and other conditions have been revised and updated in the permit accordingly.

SECTION K.1 EMISSIONS UNIT OPERATION CONDITIONS

~~[Reserved]~~

BEFORE Shutdown of BW-BOILER and E BOILER

Emissions Unit Description:

Boilerhouse I Affected Facilities/Sources
This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) standards that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source subject to the applicable regulation.

(a) The Boilerhouse I area includes boilers that are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. Those boilers are identified as: E BOILER, BW-BOILER, and R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to the E BOILER, BW-BOILER, and R BOILER are specified in Section D of this permit.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

K.1.1 BEFORE Shutdown of BW-BOILER and E BOILER - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Instituation Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD specified in Section D.1 of the permit apply to the E BOILER, BW-BOILER, and R BOILER.

SECTION K.1 AFTER Shutdown of BW-BOILER and E BOILER

Emissions Unit Description:

<u>Boilerhouse I Affected Facilities/Sources</u>

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) standards that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source subject to the applicable regulation.

(a) **The Boilerhouse I area includes one boiler that is part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. This boiler is identified as: R BOILER. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a**

major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The general and specific requirements of 40 CFR 63, Subpart DDDDD which are applicable to R BOILER is specified in Section D of this permit.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

K.1.1 AFTER Shutdown of the BW-BOILER and E BOILER National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Instituation Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

The requirements of 40 CFR Part 63, Subpart DDDDD specified in Section D.1 of the permit apply to the R BOILER.

SECTION K.2 EMISSIONS UNIT OPERATION CONDITIONS - BEFORE Shutdown of BW-BOILER and E BOILER

Emissions Unit Description: Boilerhouse I

BH I Boilers

(b) The boilers located in the Boilerhouse I Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit[d][e]	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
09-001	BW-BOILER	B&W BOILER natural gas-**fired** with/without supplemental hydrogen	None	None	173 MMBtu/hr	1975
09-002	E BOILER	ERIE BOILER coal- fired	BHI Baghouse	None	249 MMBtu/hr	1975
~~09-002~~	~~L BOILER~~	~~LASKER BOILER coal fired~~	~~BHI Baghouse~~	~~None~~	~~128.7 MMBtu/hr (design)~~	~~1962~~
09-106	R BOILER	RILEY BOILER natural gas-fired	None	None	178.5 MMBtu/hr	1969

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) E **BOILER** ~~Boiler, L Boiler~~, BW-**BOILER** ~~Boiler,~~ and R **BOILER** ~~Boiler~~ may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a **gas** chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use the E **BOILER** ~~rie Boiler, Lasker Boiler~~, **BW BOILER** ~~B&W Boiler~~, or R **BOILER** ~~iley Boiler~~ for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either a~~n~~ **COS Oxidizer** ~~oxidizer~~ (08-706) or **COS Flare** ~~flare~~ (08-707). The **COS Oxidizer** ~~oxidizer~~ and **COS Flare** ~~flare~~ are described in Section I of this permit. The **COS Flare** ~~flare~~ (08-707) serves only as back-up to the **COS Oxidizer** ~~oxidizer~~ (08-706) ~~and~~ **or** during safety interlock of the system.
(e) E **BOILER** ~~Boiler~~, BW-**BOILER** ~~Boiler~~, and R B**OILER** ~~oiler~~ are used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to either the E **BOILER** ~~Boiler~~ or R **BOILER** ~~Boiler~~ for control. **After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

SECTION K.2 EMISSIONS UNIT OPERATION CONDITIONS- AFTER Shutdown of BW-BOILER and E BOILER

Emissions Unit Description: Boilerhouse I
BH I Boilers

(b) The boiler located in the Boilerhouse I is identified as an emissions unit below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum heat input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit[(d)(e)]	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
09-106	R BOILER	RILEY BOILER natural gas fired	None	None	178.5 MMBtu/hr	1969

(a)	**Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40)).**
(b)	**Equipment is integral to the process operation.**
(c)	**When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.**
(d)	**R BOILER may be used for controlling organic sulfides from the COS stream. The COS stream is the regeneration gas stream created by carbon adsorbers used in the carbon monoxide generation/purification process; carbon monoxide is used in the LEXAN# production facility. Downstream of the adsorbers is a gas chromatograph (GC) that measures constituents in the CO process stream; the GC indicates when the adsorber should switch between the In-process or regeneration mode. When switched to the regeneration mode, organic sulfide impurities are removed from the carbon and become part of the regeneration gas stream known as the COS stream. The COS stream contains organic sulfides; which primarily consist of Carbonyl Sulfide, Hydrogen Sulfide, and Carbon Disulfide. In addition to having the option to use R BOILER for controlling these organic sulfides from the COS stream, the Permittee is also authorized to feed the COS stream to either a COS Oxidizer (08-706) or COS Flare (08-707). The COS Oxidizer and COS Flare are described in Section I of this permit. The COS Flare (08-707) serves only as back-up to the COS Oxidizer (08-706) or during safety interlock of the system.**
(e)	**R BOILER is used for controlling VOC emissions from the SHEETFUMES stream. The SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S4 and S5. The SHEETFUMES stream may be vented to R BOILER for control. After SHEETFUMES TO (Section L of this permit) is operational, the SHEETFUMES stream may be vented to it.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

(a) Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the boilers identified as E BOILER, ~~L BOILER,~~ BW-BOILER, or R BOILER, and the COS Vent Oxidizer and COS Flare listed in Condition I.2.1.

(1) The total sulfur input to E BOILER ~~and L BOILER~~ (stack no. 09-002) and the carbon monoxide generators listed in Condition I.2.1(a) shall not exceed 2,536.75 tons in any 365-day period, rolled on a daily basis.

The sulfur inputs shall be determined according to the following equation:

*Daily Sulfur Input = Daily Coke Usage * (wt% Sulfur of Coke) + Daily Coal Usage * (wt% Sulfur of Coal)*

(2) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour or the rate determined in the most recent stack test of the E BOILER ~~or L BOILER~~ such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of this Part 70 permit) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

Compliance with these conditions and Conditions G.2.1(a) and I.2.1 will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons

per year each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

(b) Pursuant to CP 129-5500-00002, Condition 12, issued on September 30, 1996, the ~~combined~~ operating **capacity** ~~capacities~~ of the E BOILER ~~and L BOILER~~ shall be limited to ~~a total of~~ 325,000 pounds of steam per hour.

Compliance with this steam production limit and the sulfur dioxide and nitrogen oxide limits for boilers H-530A and H-530B pursuant to Condition E.4.1, limits the net increase in sulfur dioxide emissions and nitrogen oxide emissions to below 40 tons per year and renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.1 Prevention of Significant Deterioration (PSD) Minor Modification Limit [326 IAC 2-2]

(a) Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to R BOILER; COS Vent Oxidizer, and COS Flare listed in Condition I.2.1.

(1) [RESERVED]

(2) The total emissions of organic sulfides from any control device to which the COS stream is vented shall be limited to 10.7 pounds VOC per hour such that the total VOC emissions from the COS stream and the resin vent gas absorbers identified as V-723 and V-519 in Section G.2 of this permit shall not exceed 55.0 tons per year and the emission units from the 1995 and 1996 resin expansion projects (the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of this Part 70 permit) shall have an emission increase of less than 40.0 tons VOC per year. This effectively limits the combination of emissions from the COS stream, the resin vent gas absorbers identified as V-723 and V-519, and the other emission units involved in the 1995 and 1996 resin expansion projects (the emission units included in Sections G.2, G.3, H.2, I.1, I.2, I.3, and J.1 of this Part 70 permit), to a total of 80.0 tons VOC per year (baseline emissions plus emission increase).

Compliance with these conditions and Conditions G.2.1(a) and I.2.1 will limit the increase in sulfur dioxide emissions and the volatile organic compound emissions to below 40 tons per year each. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2, will not apply.

(b) Compliance with this steam production limit and the sulfur dioxide and nitrogen oxide limits for boilers H-530A and H-530B pursuant to Condition E.4.1, limits the net increase in sulfur dioxide emissions and nitrogen oxide emissions to below 40 tons per year and renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.2 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

Whenever the C-41 and C-42 coating processes are operating and VOC emissions are vented to any of the three (3) boilers identified as the E BOILER, R BOILER, and BW-**BOILER** ~~Boiler~~, as described in Section L of this permit, such boiler(s) shall maintain a minimum overall control

efficiency of 81 % including capture and removal efficiencies. This control efficiency is required to limit the net emissions increase of VOC to less than 40 tons per 12 consecutive month period after the 1984 coating line construction.

Compliance with this Condition and the C-41 and C-42 production limitation as described in Condition L.2.1(a) is equivalent to 93 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the net emission increase below PSD significant emission levels. These conditions render the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.2 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

Whenever the C-41 and C-42 coating processes are operating and VOC emissions are vented to R BOILER, as described in Section L of this permit, the boiler shall maintain a minimum overall control efficiency of 81 % including capture and removal efficiencies. This control efficiency is required to limit the net emissions increase of VOC to less than 40 tons per 12 consecutive month period after the 1984 coating line construction.

Compliance with this Condition and the C-41 and C-42 production limitation as described in Condition L.2.1(a) is equivalent to 93 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the net emission increase below PSD significant emission levels. These conditions render the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.3 Volatile Organic Compounds (VOC) from S-4 and S-5 Coating Lines [326 IAC 8-2-5]

Whenever the S-4 or S-5 coating processes are operating and VOC emissions are vented to any of the three (3) boilers identified as the E BOILER, R BOILER, and BW-**BOILER** ~~Boiler~~, as described in Section L of this permit, such boiler(s) shall maintain a minimum overall control efficiency of 70 % including capture and removal efficiencies. This control efficiency limits the emissions of VOC to less than 2.9 pounds per gallon excluding water of coating, for coating delivered to the applicator of S-4 and S-5.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.3 Volatile Organic Compounds (VOC) from S-4 and S-5 Coating Lines [326 IAC 8-2-5]

Whenever the S-4 or S-5 coating processes are operating and VOC emissions are vented to R BOILER, as described in Section L of this permit, the boiler shall maintain a minimum overall control efficiency of 70 % including capture and removal efficiencies. This control efficiency limits the emissions of VOC to less than 2.9 pounds per gallon excluding water of coating, for coating delivered to the applicator of S-4 and S-5.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.4 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-1]

(a) Pursuant to 326 IAC 6-2-1(c), particulate emissions shall ~~each~~ be limited to 0.80 pounds per MMBtu of heat input for ~~L BOILER and~~ R BOILER.

(b) Pursuant to 326 IAC 6-2-1(c), particulate emissions shall be limited to 0.42 pounds per MMBtu of heat input for E BOILER. This limitation was calculated using the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where

C = 50 ug/m3
Pt = emission rate limit (lbs/MMBtu)
Q = 827.5 MMBtu/hr
N = 5 stacks
a = plume rise factor (0.67)
h = 220 ft stack height

(c) Pursuant to CP 65-01-94-0206, Condition 4, issued on March 23, 1990 and 326 IAC 6-2-1(g), particulate emissions shall be limited to 0.35 pounds per MMBtu of heat input for BW-BOILER.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.4 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-1]

(a) Pursuant to 326 IAC 6-2-1(c), particulate emissions shall be limited to 0.80 pounds per MMBtu of heat input for R BOILER.

(b) [RESERVED]

(c) [RESERVED]

BEFORE Shutdown of E BOILER

K.2.5 Sulfur Dioxide (SO2) [326 IAC 7-1.1]

(a) [RESERVED]

(b) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the SO2 emissions from the ~~three (3) coal fired boilers, identified as~~ E BOILER ~~and L BOILER~~ shall ~~each~~ not exceed 6.0 pounds per million Btu (lbs/MMBtu).

Condition K.2.5 shall cease to apply after the shutdown of E BOILER in Boilerhouse I is complete.

AFTER Shutdown of E BOILER

K.2.5 Sulfur Dioxide (SO2) [326 IAC 7-1.1] [RESERVED]

K.2.6 [Reserved]

Compliance Determination Requirements

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.7 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to the boilers identified as E BOILER, ~~L BOILER,~~ BW-BOILER, or R BOILER, and the COS Vent Oxidizer and COS Flare identified in Condition I.2.1.

(a) In order to comply with Condition K.2.1(a)(2), at least one of the control devices used for organic sulfide control (E BOILER, ~~L BOILER,~~ BW-BOILER, or R BOILER, or the COS Vent Oxidizer or COS Flare described in Section I) shall be in operation and control organic sulfide emissions from the COS stream at all times that the carbon monoxide generators described in I.2.1 are in operation.

(b) To determine compliance with Condition K.2.1(a)(1):

(1) The sulfur content of the coal used by ~~L BOILER and~~ E BOILER shall be

analyzed for each day the boiler~~s~~ operate**s**; and

(2) The sulfur content of the coke used in the carbon monoxide generators described in Condition I.2.1 shall be analyzed as received (vendor delivery analysis may be used, approved by IDEM on 8/1/05) for each day the carbon monoxide generators operate.

(c) To determine compliance with Condition K.2.1(a)(2) and whenever the COS stream is vented to two or more of the three types of control devices permitted for use (boilers described in this section; or **COS Vent Oxidizer** ~~oxidizer~~ and **COS Flare** ~~flare~~ as described in Section I) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the E BOILER ~~or L BOILER~~ equal~~s~~:

*(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the E BOILER ~~or L BOILER~~) * (24 hours per day)*

(B) Daily VOC emissions from the COS Vent Oxidizer equal~~s~~:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of **COS Vent Oxidizer** ~~oxidizer~~ as determined in the most recent stack test)*

(C) Daily VOC emissions from the **COS** Flare equal~~s~~:

*Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)*

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to two or more of the three types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by E BOILER ~~or L BOILER~~, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the E BOILER ~~or L BOILER~~, multiplied by the number of hours the organic sulfides were vented to the E BOILER ~~or L BOILER~~; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the **COS** Flare, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the **COS** Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.7 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

Pursuant to Condition D.1.1 of permit SSM 129-14373-00002, issued on May 9, 2002, and to render the requirements of 326 IAC 2-2 not applicable, the following conditions as revised through the Title V permit shall apply to R BOILER; COS Vent Oxidizer and COS Flare identified in Condition I.2.1.

(a) In order to comply with Condition K.2.1(a)(2), at least one of the control devices used for organic sulfide control (R BOILER; COS Vent Oxidizer or COS Flare described in Section I) shall be in operation and control organic sulfide emissions from the COS stream at all times that the carbon monoxide generators described in I.2.1 are in operation.

(b) [RESERVED]

(c) To determine compliance with Condition K.2.1(a)(2) and whenever the COS stream is vented to two or more of the three types of control devices permitted for use (R BOILER described in this section; or COS Vent Oxidizer and COS Flare as described in Section I) during a calendar day, VOC emissions shall be calculated as follows:

(1) When calculating daily VOC emissions from a specific control device, the Permittee shall use the following equations as appropriate:

(A) Daily VOC emissions from the R BOILER equal:

(10.7 pounds organic sulfides per hour or the rate determined in the most recent stack test of the R BOILER) * (24 hours per day)

(B) Daily VOC emissions from the COS Vent Oxidizer equal:

Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - destruction efficiency of COS Vent Oxidizer as determined in the most recent stack test)

(C) Daily VOC emissions from the COS Flare equal:

Daily coke usage * (wt % sulfur of coke) * (60.075 lb-mol wt. of organic sulfides / 32.064 lb-mol wt. of sulfur) * (1 - 0.99)

(2) When calculating the total daily VOC emissions from more than one specific control device whenever the COS stream was vented to two or more of the three types of control devices permitted for use, the Permittee shall sum the organic sulfides emissions (VOC's) from each type of control device used during the day as follows:

(A) For organic sulfides (VOC's) controlled by R BOILER, the value for a day's VOC emissions shall be 10.7 pounds organic sulfides per hour, or the rate determined in the most recent stack test of the R BOILER, multiplied by the number of hours the organic sulfides were vented to the R BOILER; and

(B) For organic sulfides (VOC's) controlled by the COS Vent Oxidizer, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(B) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Vent Oxidizer and divided by the amount of time in such a calendar day that any organic sulfides were generated; and

(C) For organic sulfides (VOC's) controlled by the COS Flare, the value for a day's VOC emissions calculated pursuant to Condition K.2.7(c)(1)(C) shall be multiplied by the ratio of the amount of time organic sulfides were vented to the COS Flare and divided by the amount of time in such a calendar day that any organic sulfides were generated.

(3) If the Permittee fails to monitor and record the amount of time that a type of control device was in use during a calendar day, the VOC emissions for that day shall be calculated assuming that, among all the types of control devices used during that day, the type of control device used that results in the highest VOC emissions was used for the entire day.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.8 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

To determine compliance with K.2.2, one or more of the three (3) boilers identified as the E BOILER, R BOILER, and BW- **BOILER** ~~Boiler~~, shall operate at all times that the C-41 and C-42 coating lines, described in Section L of this permit, are operating while using VOC based coating.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.8 Volatile Organic Compounds (VOC) from C-41 and C-42 SHEETFUMES [326 IAC 2-2]

To determine compliance with K.2.2, R BOILER, shall operate at all times that the C-41 and C-42 coating lines, described in Section L of this permit, are operating while using VOC based coating.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.9 Volatile Organic Compounds (VOC) from S-4 and S-5 [326 IAC 8-2-5]

To determine compliance with K.2.3, one or more of the three (3) boilers identified as the E BOILER, R BOILER, and BW-**BOILER** ~~Boiler~~, shall operate at all times that the S-4 and S-5 coating lines, described in Section L of this permit, are operating while using VOC based coating.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.9 Volatile Organic Compounds (VOC) from S-4 and S-5 [326 IAC 8-2-5]

To determine compliance with K.2.3, R BOILER, shall operate at all times that the S-4 and S-5 coating lines, described in Section L of this permit, are operating while using VOC based coating and the coating emissions are vented to the R BOILER.

BEFORE Shutdown of E BOILER in Boilerhouse I

K.2.10 Particulate Control

To demonstrate compliance with Condition K.2.4, the baghouse on E BOILER ~~and L BOILER,~~ , used for particulate control, shall be in operation and control particulate emissions from the

~~facilities~~ E BOILER ~~and L BOILER~~, at all times ~~any of these facilities are~~ **it is** in operation except during startup when the temperature is below 250 degrees F. The baghouse bypass damper shall be operated in the closed position or in a position no more open than the position documented in accordance with a valid compliance demonstration conducted pursuant to Condition K.2.12(g).

Condition K.2.10 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.10 [RESERVED]

BEFORE Shutdown of E BOILER
K.2.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3] [326 IAC 7-2] [326 IAC 7-1.1-2]

(a) [RESERVED]

(b) In order to demonstrate compliance with the SO2 limits pursuant to Condition K.2.5(b), the Permittee shall demonstrate, using a calendar month average, that the sulfur dioxide emissions do not exceed the equivalent of six (6.0) pounds per MMBtu from the ~~three (3) coal fired boilers, identified as~~ E BOILER**,** ~~and L BOILER~~ when combusting coal. The Permittee may use one of the following methods pursuant to 326 IAC 7-2-1(e) and specified in 326 IAC 3-7:

(1) Pursuant to 326 IAC 7-2-1(e) and 326 IAC 3-7, coal sampling and analysis data for E BOILER ~~and L BOILER~~ shall be collected as follows:

(A) Coal sampling shall be performed using the methods specified in 326 IAC 3-7-2(a), and sample preparation and analysis shall be performed as specified in 326 IAC 3-7-2(c), (d), and (e); or

****

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Condition K.2.11 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.11 [RESERVED]

BEFORE Shutdown of BW-BOILER and E BOILER
K.2.12 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition K.2.1(a)(2), the Permittee shall perform VOC testing for E BOILER ~~and L BOILER~~ when organic sulfides are being vented to ~~them~~ **it** using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years thereafter from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

****

(c) If the Permittee makes any change or modification to the boilers R BOILER, BW-BOILER, ~~L BOILER~~, and/or E BOILER to affect the conversion of organic sulfides, the Permittee shall perform a compliance stack test for organic sulfides within 60 days after achieving the maximum production rate but no later than 180 days after making such change or modification. The new organic sulfides emissions level determined by the compliance

stack test shall, beginning ten (10) business days after OAQ receives the test report for the compliance stack test, be used by the Permittee to calculate compliance with the VOC emissions limit in Condition K.2.1(a)(2).

(d) [Reserved]

(e) 1) In order to demonstrate compliance with Condition K.2.4, the Permittee shall perform PM testing for R BOILER utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

2) If the Permittee chooses to control emissions from the COS stream or SHEETFUMES using the BW-**BOILER** ~~Boiler~~, PM testing shall be performed for BW-**BOILER** ~~Boiler~~ utilizing methods as approved by the Commissioner. Testing shall be conducted within ninety (90) days of beginning to use the BW-**BOILER** ~~Boiler~~ for control of either the COS stream or SHEETFUMES. Testing shall be repeated at least once every five (5) years from the date of the most recent compliance demonstration.

(f) The Permittee shall perform VOC testing for BW-BOILER utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing, and shall be conducted within ninety (90) days of initial routing of the SHEETFUMES to BW-**BOILER** ~~Boiler~~. This test shall be repeated at least once every five (5) years from the date of this compliance demonstration.

(g) In order to demonstrate compliance with Condition K.2.4, the Permittee shall perform PM testing for E BOILER ~~and L BOILER~~ utilizing methods as approved by the Commissioner. The Permittee shall document the baghouse bypass damper position during the performance test. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.12 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) [RESERVED]

(b) If the Permittee chooses to control the COS stream using R BOILER, and in order to determine the minimum steam production rate necessary to ensure that organic sulfide emissions will not exceed 10.7 pounds per hour when using R BOILER for the destruction of organic sulfides as described in Condition K.2.1(a)(2), compliance stack tests shall be performed for organic sulfides on R BOILER upon venting the COS stream to R BOILER for the destruction of organic sulfides. These tests shall be performed within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. Testing shall be conducted in accordance with Section C- Performance Testing.

(c) If the Permittee makes any change or modification to R BOILER to affect the conversion of organic sulfides, the Permittee shall perform a compliance stack test for organic sulfides within 60 days after achieving the maximum production rate but no later than 180 days after making such change or modification. The new organic sulfides emissions level determined by the compliance stack test shall, beginning ten (10) business days after OAQ receives the test report for the

compliance stack test, be used by the Permittee to calculate compliance with the VOC emissions limit in Condition K.2.1(a)(2).

(d) [Reserved]

(e) 1) In order to demonstrate compliance with Condition K.2.4, the Permittee shall perform PM testing for R BOILER utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

2) [RESERVED]

(f) [RESERVED]

(g) [RESERVED]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.13 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

(a) Whenever the COS stream is being vented to E BOILER ~~or L BOILER~~ to destroy organic sulfides:

(1) ~~Such boiler(s)~~ **E BOILER** shall operate at **a** minimum steam production rate~~s~~ of 154,000 pounds per hour ~~and 55,000 pounds per hour, respectively~~; and

(2) The Permittee shall monitor and record the steam production rate ~~(s)~~ of ~~such boiler(s)~~ **E BOILER**. Steam production rates shall be measured as block averages with the blocks to begin at midnight, 0300, 0600, 0900, 1200, 1500, 1800, and 2100 hours, and with each average to consist of at least ten measurements made during each block of time. When for any three (3) hour average reading (arithmetic average of three contiguous one-hour periods), the steam production ~~limits are~~ **rate is** outside the established range in K.2.13(a)(1), the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from the limitation set forth in Condition K.2.1 of this permit.

****

AFTER Shutdown of BW-BOILER and E BOILER

K.2.13 Volatile Organic Compounds (VOC) and Sulfur Dioxide (SO2) from the COS stream

(a) [RESERVED]

(b) Whenever the COS stream is being vented to R BOILER to destroy organic sulfides, the R BOILER shall operate at a minimum steam production rate needed to ensure that the organic sulfides emissions will not exceed 10.7 pounds per hour, or the rate determined in the most recent stack test conducted as required by Condition K.2.12(a), when the COS stream is vented to the boiler for destruction. The minimum steam production rates shall be determined during the stack test required by Condition K.2.12(b).

(c) Whenever the COS stream is being vented to the COS Vent Oxidizer or the COS Flare to destroy organic sulfides, Condition I.2.5 applies.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.14 Volatile Organic Compounds (VOC) from C-41, C-42, S-4 and S-5 [40 CFR 64]

Whenever the C-41, C-42, S-4 or S-5 coating lines, described in Section L of this permit, are operating using VOC-based coating and VOC emissions are vented to one or more of the E BOILER, R BOILER, and BW-**BOILER** ~~Boiler~~, for control of VOC:

****

AFTER Shutdown of BW-BOILER and E BOILER

K.2.14 Volatile Organic Compounds (VOC) from C-41, C-42, S-4 and S-5 [40 CFR 64]

Whenever the C-41, C-42, S-4 or S-5 coating lines, described in Section L of this permit, are operating using VOC-based coating and VOC emissions are vented to R BOILER for control of VOC:

(a) R BOILER shall operate at a minimum combustion zone temperature of 1400°F, calculated as a rolling 3-hour average, or the temperature established during the most recent stack test; and

(b) The Permittee shall monitor and record the combustion zone temperature of R BOILER at least once each hour. When for any three (3) hour average reading (arithmetic average of three consecutive one-hour operating periods), the temperature is below 1400°F or the temperatures established during the most recent stack test, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition K.2.2 and L.2.1(a) of this permit,or K.2.3 and L.2.4 of this permit,or all, as applicable. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(c) The Permittee shall monitor and record the boiler makeup air flowrate into the duct from Building 4 at least once every 15 minutes to demonstrate that the VOC captured by enclosures for the C-41, C-42, S-4 and S-5 coating operations is not bypassing to atmosphere. When for any three (3) hour average reading (arithmetic average of three consecutive one-hour operating periods), the flowrate is below 500 acfm, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from the limitation set forth in Condition K.2.2 and L.2.1(a) of this permit, or K.2.3 and L.2.4 of this permit, or all, as applicable. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

K.2.15 [RESERVED]

BEFORE Shutdown of E BOILER

K.2.16 Continuous Opacity Monitoring [326 IAC 3-5] [40 CFR 64]

Pursuant to CP 129-5500-00002, Condition 11, as amended by Administrative Amendment A129-10164-00002 issued on January 22, 1999, and 40 CFR 64 a continuous monitoring system, which meets the performance specifications of 326 IAC 3-5-2, shall be calibrated, maintained, and operated for measuring opacity of the ~~combined~~ stack emissions from the E BOILER ~~and L BOILER~~, except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks and zero and span adjustments. For purposes of 40 CFR 64, opacity monitoring via the COMS is an indicator of good operation and maintenance of the baghouse.

Condition K.2.16 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.16 [RESERVED]

BEFORE Shutdown of E BOILER
K.2.17 COM Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR 64]

(a) In the event of a continuous opacity monitor (COM) opacity exceeding thirty-five percent (35%) average opacity for three (3) consecutive six (6) minute averaging periods, reasonable response steps shall be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below thirty-five percent (35%).

****

Condition K.2.17 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.17 [RESERVED]

BEFORE Shutdown of E BOILER
K.2.18 Method 9 Opacity Readings

(a) **********

(b) Whenever a COM is malfunctioning, reasonable response steps shall be taken in accordance with Section C - Response to Excursions or Exceedances whenever the opacity from E BOILER ~~and L BOILER~~, measured by Method 9, exceeds thirty-five percent (35%) for any three (3) consecutive six (6) minute average periods. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Condition K.2.18 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER
K.2.18 [RESERVED]

BEFORE Shutdown of BW-BOILER
K.2.19 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the R BOILER and BW-BOILER stack exhaust shall be performed once per day during normal daylight operations when the boilers burn COS. A trained employee shall record whether emissions are normal or abnormal.

****

(e) If abnormal emissions are observed at the stack exhausts from R BOILER **or** ~~and~~ BW-BOILER, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

AFTER Shutdown of BW-BOILER
K.2.19 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of R BOILER stack exhaust shall be performed once per day during normal daylight operations when the boilers burn COS. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to result in higher emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed at the stack exhaust from R BOILER, the Permittee shall take reasonable response steps. An observation of abnormal emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions) or an applicable opacity limit is not a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

BEFORE Shutdown of E BOILER

K.2.20 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across each baghouse used in conjunction with E BOILER ~~and L BOILER~~ at least once per day when these boilers are in operation and the baghouse is used to control emissions from such boilers. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 12.0 inches of water or a range established based upon stack test data, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, and shall be calibrated in accordance with the manufacturer's specifications. The specifications shall be available on site.

(c) The Permittee shall record the position of the baghouse bypass damper used in conjunction with E BOILER ~~and L BOILER~~ baghouse at least once per day when any of these boilers is in operation. A reading is not required if the Permittee welds the damper in the closed position or a car-seal is used, the damper position remains unchanged and is verified at the time the weld or car-seal is applied.

Condition K.2.20 shall cease to apply after the shutdown of the E BOILER is complete.

AFTER Shutdown of E BOILER

K.2.20 [RESERVED]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.21 Record Keeping Requirements

(a) To document the compliance status with Condition K.2.1(a) and K.2.7, the Permittee shall maintain the following records:

(1) The total daily sulfur input, and the 365-day rolling total of total daily sulfur input,

to the E BOILER ~~and L BOILER~~ and carbon monoxide generators.

(2) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition K.2.7(c).

(3) Daily analyses of sulfur content of coal used by the ~~L BOILER and~~ E BOILER.

(4) Identity of each type of control device (boilers or, oxidizer or flare as described in Section I) to which the COS stream is vented for Organic Sulfide control and the amount of time during a calendar day that the type of control device is in use; except failure to maintain such records and calculating compliance pursuant to Condition K.2.7(c)(3) shall not be a deviation from this requirement.

(5) Three-hour block average steam production rate~~s~~ for ~~L BOILER and~~ E BOILER during periods when the COS stream is vented to the~~se~~ boiler~~s~~ for organic sulfide control.

(b) The Permittee shall maintain records of the instantaneous, integrated total steam loadings of the E BOILER ~~and L BOILER~~ to document compliance with Condition K.2.1(b).

(c) In order to document the compliance status with Conditions K.2.2, K.2.3, K.2.8, and K.2.9, the Permittee shall maintain:

(1) At least hourly, records of the combustion zone temperatures of any of the ~~four (4)~~ **three (3)** boilers, BW-BOILER, E BOILER, ~~L BOILER,~~ and R BOILER that are being used to control VOC emissions from C-41,C-42, S-4, or S-5.

(2) At least once every 15 minutes, records of the boiler makeup air flowrate into the duct from Building 4 to demonstrate that the VOC captured by enclosures for the C-41, C-42, S-4 and S-5 coating operations is not bypassing to atmosphere.

(d) To document the compliance status with the SO2 provisions in Conditions K.2.5 and K.2.11, the Permittee shall maintain records in accordance with (1) and (2) below.

(1) All fuel sampling and analysis data, pursuant to 326 IAC 7-2, and data collected in accordance with Condition K.2.11.

(2) Actual fuel usage since last compliance determination period.

(e) To document the compliance status with K.2.5(b), the Permittee shall use methods specified in 326 IAC 3-7-5(a) and develop a standard operating procedure (SOP) for E BOILER ~~and L BOILER~~ to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to Condition K.2.11(b). In addition any revision to the SOP shall be submitted to IDEM, OAQ.

****

(h) To document the compliance status with Condition K.2.20, the Permittee shall maintain the records recorded once per day of the position of the baghouse bypass damper and of the pressure drop across the baghouse used in conjunction with E BOILER ~~and L BOILER~~ during normal operation. Daily records of the baghouse bypass damper position are not required on days for which the Permittee maintains the damper in the closed position by using a car-seal or by welding, provided that the Permittee has previously documented the damper position at the time the car-seal or weld is applied.

(i) All records required to be maintained by Condition K.2.21 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.21 Record Keeping Requirements

(a) To document the compliance status with Condition K.2.1(a) and K.2.7, the Permittee shall maintain the following records:

(1) The total daily sulfur input, and the 365-day rolling total of total daily sulfur input, to the carbon monoxide generators.

(2) The weight of VOCs emitted each day and the 365-day rolling total of the weight of VOCs emitted from the emission units V-723 and V-519, and the COS stream (involved in the 1995 or 1996 resin expansion project), considering capture and destruction (or removal) efficiency. This record should include the weight of organic sulfides emitted each day from each type of control device (boilers; oxidizer; flare), calculated pursuant to Condition K.2.7(c).

(3) [RESERVED].

(4) Identity of each type of control device (boiler, oxidizer, or flare as described in Section I) to which the COS stream is vented for Organic Sulfide control and the amount of time during a calendar day that the type of control device is in use; except failure to maintain such records and calculating compliance pursuant to Condition K.2.7(c)(3) shall not be a deviation from this requirement.

(5) [RESERVED]

(b) [RESERVED]

(c) In order to document the compliance status with Conditions K.2.2, K.2.3, K.2.8, and K.2.9, the Permittee shall maintain:

(1) At least hourly, records of the combustion zone temperature of R BOILER when being used to control VOC emissions from C-41,C-42, S-4, or S-5.

(2) At least once every 15 minutes, records of the boiler makeup air flowrate into the duct from Building 4 to demonstrate that the VOC captured by enclosures for the C-41, C-42, S-4 and S-5 coating operations is not bypassing to atmosphere.

(d) [RESERVED]

(e) [RESERVED]

(f) [RESERVED]

(g) To document the compliance status with Condition K.2.19, the Permittee shall maintain the daily record of the visible emission notations of the stack exhaust required by Condition K.2.19(a). When a daily record of normal or abnormal is not recorded, the Permittee shall maintain records of the reason(s) for the lack of a visible emission notation (e.g. the process did not operate that day or did not burn either oil or COS that day).

(h) [RESERVED]

(i) All records required to be maintained by Condition K.2.21 shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

BEFORE Shutdown of BW-BOILER and E BOILER

K.2.22 Reporting Requirements

(a) **********

(b) To document the compliance status with Condition K.2.1(b), a quarterly report of any one-hour periods where the ~~combined~~ steam loading~~s~~ of E BOILER ~~or L BOILER~~ exceeded 325,000 pounds per hour shall be submitted using the deviation reporting forms located at the end of Section C of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(c) **********

(d) A quarterly report of the calendar month average coal sulfur content, coal heat content, and sulfur dioxide emission rate in pounds per million Btus for E BOILER ~~and L BOILER~~ and the total monthly coal consumption shall be submitted using the reporting forms located at the end of Section K of the permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. [326 IAC 7-2-1(c)(2)]

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) The natural gas boiler certification shall be used for BW**-**BOILER. This certificate provides documentation of each time interval when the boiler is burning natural gas and visual emissions notations are not necessary for BW**-**BOILER. The natural gas boiler certification shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days after the end of the six (6) month period being reported. The natural gas-fired boiler certification does require the certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

****

Condition K.2.22 shall cease to apply after the shutdown of the E BOILER and BW-BOILER in Boilerhouse I is complete.

AFTER Shutdown of BW-BOILER and E BOILER

K.2.22 Reporting Requirements

(a) A quarterly summary of the information to document the compliance status with Condition K.2.1(a)(2) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(b) [RESERVED]

(c) [RESERVED]

(d) [RESERVED]

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) [RESERVED]

(f) [RESERVED]

(g) The Permittee shall submit the reports and records required by Condition K.2.22 to the address listed in Section C - General Reporting Requirements, of this permit.

(h) In accordance with 40 CFR 64, the Permittee shall submit monitoring reports for the boiler temperatures required to be monitored by Condition K.2.14(b) and the makeup air flowrate required to be monitored by Condition K.2.14(c). The reports shall be submitted at least every 6 months and include the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) If a QIP is required, a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

Results of monitoring of boiler combustion zone temperatures, required by Condition K.2.14(b), and boiler makeup air inlet flowrate, required by Condition K.2.14(c), are not excursions and do not require excursion reporting if the results did not require response steps in accordance with Section C – Response to Excursions or Exceedances.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION K.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Boilerhouse I

BH I Storage and Heat Exchange Operations

(c) The storage and heat exchange operations located in the Boilerhouse I Area are identified as emission units below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Insignificant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity[(c)]	Date of Construct
~~09-003~~	~~NO.6 ST TK~~	~~NO.6 FUEL OIL STORAGE TANK~~	~~None~~	~~None~~	~~1,514 m^3~~	~~N/A~~
~~09-004~~	~~GSTA~~	~~UNLEADED GASOLINE STORAGE TANK VH-1~~	~~None~~	~~None~~	~~3.81 m^3~~	~~N/A~~
~~09-005~~	~~GST(L)~~	~~DIESEL-R STORAGE TANK VH-2~~	~~None~~	~~None~~	~~2.18 m^3~~	~~N/A~~
~~09-009~~	~~DST~~	~~DIESEL STORAGE TANK VH-3~~	~~None~~	~~None~~	~~2.13 m^3~~	~~N/A~~
~~09-100~~	~~F-CVCS-BH1~~	~~CENTRAL VACUUM SYSTEM~~	~~None~~	~~None~~	~~0.175 tons/hour~~	~~N/A~~
09-101	BH1 CTC1	COOLING TOWER #1 CELL A	None	None	N/A	N/A
09-102	BH1 CTC2	COOLING TOWER #1 CELL B	None	None	N/A	N/A
09-103	BH1 CTC3	COOLING TOWER #1 CELL C	None	None	N/A	N/A
09-104	BH1 CTC4	COOLING TOWER #1 CELL D	None	None	N/A	N/A
09-105	BH1 CTC5	COOLING TOWER #1 CELL E	None	None	N/A	N/A
09-107	PRV-TS	PRV TEST STAND	None	None	N/A	N/A
09-111	MG CTC3	COOLING TOWER CELL 3	None	None	N/A	N/A
09-112	GST VH4	UNLEADED GASOLINE TANK VH4	None	None	2.13 m^3	N/A
09-113	DST VH5	DIESEL STORAGE TANK VH5	None	None	2.13 m^3	N/A
~~09-114~~	~~FT FUEL TK~~	~~FIRE TRAINING GROUND FUEL TANK~~	~~None~~	~~None~~	~~4.16 m^3~~	~~N/A~~

(a) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21)).
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

K.3.1 **RESERVED** ~~Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]~~

~~Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission unit F-CVCS-BH1 shall not exceed the rates calculated using the following equation:~~

~~$E = 4.10 P^{0.67}$~~ ~~where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour~~

~~The following table sets forth the current maximum process weight rate for this emission unit and the allowable rate of emission calculated for the process weight rate. The current maximum process weight rate shown is not a limitation.~~

~~Stack/Vent ID~~	~~Emission Unit ID~~	~~Max Process Weight Rate (tons/hr)~~	~~Rate of Emission (lb/hr)~~
~~09-100~~	~~F-CVCS-BH1~~	~~0.175~~	~~1.28~~

K.3.2 Motor Vehicle Tampering, Engine Switching, and Fuel Switching [326 IAC 13-2.1-3]

Pursuant to 326 IAC 13-2.1-3(c), the Permittee shall not engage in fuel switching. This condition is not federally enforceable.

Section K consists of the following Sections: K.1, K.2, K.3, one (1) Part 70 Usage Reporting Form, three (3) Part 70 Quarterly Reporting Forms, and one (1) Part 70 Semi-Annual Natural Gas Fired Boiler Certification form.

Condition K.3.2 concludes the Section K requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section
Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Conditions G.2.1(a)~~,~~**;** I.2.1(b)~~,~~**;** and K.2.1(a)(2)
Facility: V-723, V-519, COS Stream
Parameter: VOC
Limit: 55 tons per 365-day period, rolled on a daily basis.

Year: _____**Month:** _____

Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365-day period	Day	VOC Emissions this day (ton/day)	VOC Emissions for the last 365-day period
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			No. of ~~d~~ **D**eviations		

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on:

Submitted by:

Title / Position:

Signature:

Date:

Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition K.2.5(b) **- E BOILER**
Facility: Vent 09-002, E BOILER
Parameter: SO_2
Limits: 6.0 lbs SO2 per million Btu heat input

Year: _____ Quarter: _____

Month	Coal Sulfur Content (%)	Coal Heat Content (Btu/lb)	Coal usage (tons/month)	SO_2 Emissions (lb/MMBTU)

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

After Shutdown of E BOILER , this form ceases to be applicable.

~~**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**~~
~~**OFFICE OF AIR QUALITY**~~
~~**COMPLIANCE DATA SECTION**~~
~~**Part 70 Quarterly Report**~~

~~Source Name: SABIC Innovative Plastics Mt. Vernon, LLC~~
~~Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620~~
~~Part 70 Permit No.: T129-30384-00002 Condition K.2.5(b)~~
~~Facility: Vent 09-002, L BOILER~~
~~Parameter: SO_2~~
~~Limits: 6.0 lbs SO2 per million Btu heat input~~
~~**Year:_____ Quarter: _____**~~

~~Month~~	~~Coal Sulfur Content (%)~~	~~Coal Heat Content (Btu/lb)~~	~~Coal usage (tons/month)~~	~~SO2 Emissions (lb/MMBTU)~~

~~☐ No deviation occurred in this month.~~
~~☐ Deviation/s occurred in this month.~~
~~Deviation has been reported on:~~
~~Submitted by:~~
~~Title / Position:~~
~~Signature:~~
~~Date:~~
~~Phone:~~

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002**- BEFORE Shutdown of BW-BOILER in Boilerhouse I**
Facility: BW-BOILER

☐ Natural Gas Only or Natural Gas with supplemental hydrogen only
☐ Alternate Fuel burned
From: _____ To: _____

Submitted by:
Signature:
Printed Name:
Title/Position:
Phone:
Date:

After shutdown of BW-BOILER, this form ceases to be applicable.

Change 10: A new RTO has been added to control VOC emission from the sheetfumes and all the necessary conditions have been added to the permit. Some of the condition has been revised or updated in the permit accordingly.

SECTION L.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Structured Products, Building 4

Structured Products Operations

(c) The Structured Products operations consist of the following emission units. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of integral device (considered integral to the process), if present; the maximum process input rate, the date of construction, if applicable, and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include additional insignificant activities listed in Section A.21 of this permit.

Significant Activities[a]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
09-001; 09-002; and 09-106	SHEETFUMES*	COATING LINES - C-41, C-42, S-4, S-5	**BEFORE Shutdown of BW-BOILER and E BOILER:** ~~Boilers in Section K~~ **BW-BOILER, E BOILER or R BOILER AFTER Shutdown of BW-BOILER and E BOILER: SHEETFUMES TO or R BOILER**	None	N/A	N/A
10-086	OSFCA	C-45 FILM COATER	None	None	N/A	N/A
10-087	OSFCB		None	None	N/A	N/A
10-199	C42FMR	C-42 FMR COOLING ZONE	None	None	N/A	N/A
10-358	C7A	C7A PLASTIC FILM WEB COATING LINE	None	None	N/A	2005
10-359	C7B	C7B PLASTIC FILM WEB COATING LINE	None	None	N/A	2005
10-360	C8	C8 PLASTIC FILM WEB COATING LINE	None	None	N/A	2006
10-361	C-6	C-6 COATING LINE	None	None	N/A	N/A

Insignificant Activities[d]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[b]	Maximum Capacity[c]	Date of Construct
10-324	CAVP-324	CONAIR VACUUM PUMP	None	Filter	1.50 tons/hour	N/A
**********	**********	**********	**********	**********	**********	**********

10-341	DHE (S1)	S1 DIE HEAD EXHAUST	None	None	0.55 tons/hour	N/A
~~10-342~~	~~MWS~~	~~MWS EXTRUDER AND DIE~~	~~None~~	~~None~~	~~0.50 tons/hour~~	~~N/A~~
10-343	CPVP1-4	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
10-344	CPVP5-8	CALIBRATOR PLATE VACUUM PUMPS	None	None	0.50 tons/hour	N/A
~~10-345~~	~~MWSAO~~	~~MWS ANNEALLING OVEN~~	~~None~~	~~None~~	~~0.50 tons/hour~~	~~N/A~~
~~10-346~~	~~MWSCO~~	~~MWS CURE OVEN~~	~~None~~	~~None~~	~~0.50 tons/hour~~	~~N/A~~
**********	**********	**********	**********	**********	**********	*******
10-**362** ~~TBD~~	SAW CHIPS	S16 SAW CHIP FILTER BAG	None	None	Less than 100 lbs/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
(b) Equipment is integral to the process operation.
(c) When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.
(d) Emission unit is defined as an insignificant activity (326 IAC 2-7-1(21))

* **BEFORE shutdown of BW-BOILER and E BOILER** ~~The~~ **the** SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42,
S-4 and S-5. The boilers described in Section K of this permit, E **BOILER** ~~Boiler~~, **BW-BOILER** and R **BOILER** ~~Boiler~~ are used for controlling VOC emissions from the SHEETFUMES stream.

*** AFTER shutdown of BW-BOILER and E BOILER, the SHEETFUMES stream is made up of VOC emissions created by the plastic sheet coating lines identified as C-41, C-42, S-4 and S-5. The boiler described in Section K of this permit, R BOILER, or SHEETFUMES TO, described in this Section, is used for controlling VOC emissions from the SHEETFUMES stream.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

L.2.1 Prevention of Significant Deterioration Minor Limit (PSD) [326 IAC 2-2]

(a) The input of volatile organic compound (VOC) to the C-41 and C-42 coating lines shall be limited to a total of 490 tons per twelve (12) consecutive month period. This production limitation and use of one or more of the boilers, E BOILER, R BOILER, and BW-**BOILER** ~~Boiler~~, for control as described in Condition K.2.2, is equivalent to 93 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the net emission increase below PSD significant emission levels. **Compliance with this** ~~This~~ condition renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

(b) ~~[RESERVED]~~ **After startup, the SHEETFUMES TO's CO emissions are limited pursuant to Condition W.1.5(a).**

(c) After startup, the SHEETFUMES TO's VOC emissions are limited pursuant to Condition W.1.5(b).

(d) After the startup of SHEETFUMES TO, the input of VOC to SHEETFUMES (C-41, C-42, S-4, and S-5) shall not exceed 543 tons per twelve (12) consecutive month period. This production limitation and use of SHEETFUMES TO whenever the SHEETFUMES VOC emissions are vented to the air pollution control device, is equivalent to 5.7 tons of VOC emissions per twelve (12) consecutive month period and is necessary to keep the emission increase below PSD significant emission levels. Compliance with this condition renders the requirements of 326 IAC 2-2, Prevention of Significant Deterioration not applicable.

L.2.2 National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating [40 CFR Part 63, Subpart JJJJ]

The Permittee shall comply with the requirements of 40 CFR 63, Subpart JJJJ by limiting organic HAP emissions from coating lines S-4, S-5, C-6, C-45, C7A, C7B, and C8 to a level specified in 40 CFR 63.3320(b)(1), (2), or (3) during times one or more coating lines use a web substrate. Descriptions of these provisions can be found in Section LL.1(b)(1), (2), or (3) of this permit. The requirements of 40 CFR 63, Subpart JJJJ do not apply to S-4, S-5, C-6, C-45, C7A, C7B, and C8 when a coating substrate that is not flexible enough to be wound or unwound as rolls is used (i.e., a substrate that does not meet the definition of web established in 40 CFR 63.3310).

L.2.3 National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products [40 CFR Part 63, Subpart PPPP]

In accordance with 40 CFR 63.4500(a)(1), the Permittee shall comply with the requirements of 40 CFR 63, Subpart PPPP, by using compliant materials that comply with the organic HAP emissions level specified in 40 CFR 63.4490(b)(1) for Sp-PPPC (including lines C-41 and C-42).

BEFORE Shutdown of BW-BOILER and E BOILER

L.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-2-5] [40 CFR 64]

Pursuant to 326 IAC 8-2-5, the Permittee shall not allow the discharge into the atmosphere **of** VOC in excess of two and nine-tenths (2.9) pounds per gallon excluding water, as delivered to the coating applicator of the S-4, S-5, C-6, C7A, C7B, and C8 coating lines.

(a) For S-4 and S-5, the use of an enclosure system for capture of VOC and use of one or more of the boilers E BOILER, R BOILER, and BW-**BOILER** ~~Boiler~~, for control as described in Condition K.2.3, limits VOC emissions to no more than the specified amount.

(b) C-6, C7A, C7B, and C8 shall use coatings that inherently do not emit VOC greater than 2.9 pounds per gallon, excluding water.

AFTER Shutdown of BW-BOILER and E BOILER

L.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-2-5] [40 CFR 64]

Pursuant to 326 IAC 8-2-5, the Permittee shall not allow the discharge into the atmosphere of VOC in excess of two and nine-tenths (2.9) pounds per gallon excluding water, as delivered to the coating applicator of the S-4, S-5, C-6, C7A, C7B, and C8 coating lines.

(a) For S-4 and S-5, the use of an enclosure system for capture of VOC and use of R BOILER or SHEETFUMES TO for control at all times when the S-4 or S-5 coating processes are operating and VOC emissions are vented to the thermal oxidizer limits VOC emissions to no more than 2.9 pounds per gallon, excluding water.

(b) C-6, C7A, C7B, and C8 shall use coatings that do not emit VOC greater than 2.9 pounds per gallon, excluding water.

L.2.5 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$$E = 4.10\ P^{0.67}$$

Where:

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

The following table sets forth the current maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate.

The current maximum process weight rate shown is not a limitation.

Stack/Vent ID	Emission Unit ID	P = Current Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
10-010	EDV S5	1.70	5.85
10-011	EHV S4	1.23	4.71
*******	**********	**********	******
10-341	DHE (S1)	0.55	2.75
~~10-342~~	~~MWS~~	~~0.50~~	~~2.58~~
10-343	CPVP1-4	0.50	2.58
10-344	CPVP5-8	0.50	2.58
~~10-345~~	~~MWSAO~~	~~0.50~~	~~2.58~~
~~10-346~~	~~MWSCO~~	~~0.50~~	~~2.58~~
10-347	F-903	0.15	1.15
**********	**********	**********	**********
10-357	F19BV	0.40	2.22

(b) **********

Compliance Determination Requirements

BEFORE Shutdown of BW-BOILER and E BOILER

L.2.6 Volatile Organic Compounds (VOC)[326 IAC 2-2]

(a) Whenever the C-41 and C-42 coating processes are operating, Conditions K.2.8 and K.2.14 of this permit apply.

****

L.2.6 AFTER Shutdown of BW-BOILER and E BOILER
Volatile Organic Compounds (VOC)[326 IAC 2-2]

(a) [RESERVED]

(b) The enclosure system to capture VOC emissions from the coating process shall operate at all times that the C-41 or C-42 coating process operates (the coating process is deemed to be operating if the cover on the coating line's dip tank is open, except if the cover is open for the purpose of performing maintenance and parts are not being coated).

(c) The SHEETFUMES TO shall operate at all times the coating process SHEETFUMES (C-41, C-42, S-4, and S-5) are directing VOC emissions to the SHEETFUMES TO while using VOC-based coatings.

(d) R BOILER shall operate at all times the coating process SHEETFUMES (C-41, C-42, S-4, and S-5) are directing VOC emissions to R BOILER while using VOC coatings.

L.2.7 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition L.2.1 and L.2.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) or by using formulation data supplied by the coating manufacturer. However, IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

AFTER Start-up of SHEETFUMES TO

D.2.7.1 Testing Requirements [326 IAC 2-6.1-5(a)(2), (4)] [326 IAC 2-1.1-11]

Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, in order to demonstrate compliance with Condition L.2.1(c), the Permittee shall perform overall control efficiency on the RTO controlling the SHEETFUMES, utilizing methods as approved by the commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.
****

~~L.2.12 VOC emissions from C-41 Coating Process [40 CFR 64]~~

~~Whenever the C-41 coating process is operating using VOC-based coating,~~**;**
~~the~~ **The** ~~Permittee shall, at least once every 15 minutes, monitor and record the pressure differential between the inside and outside of the coating application enclosure, and the inlet (airwash) and outlet (cooling) enclosures having natural draft openings to the atmosphere. All values recorded during an hour when C-41 is operating are used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When, for any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) of the pressure differential, the pressure differential exceeds the range specified~~ **(**~~C-41 Air Wash: less than 0.007 inches water, C-41 Coating: less than 0.146 inches water and greater than 0.015 inches water, and C-41 Cooling: greater than 0.053 inches water), the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.~~

L.2.12 VOC emissions from C-41 Coating Process [40 CFR 64]

Whenever the C-41 coating process is operating using VOC-based coating:

(a) The Permittee shall, at least once every 15 minutes, monitor and record the pressure differential between the inside and outside of the coating application enclosure, and the inlet (airwash) and outlet (cooling) enclosures having natural draft openings to the atmosphere. All values recorded during an hour when C-41 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When, for any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) of the pressure differential, the pressure differential exceeds the range specified (C-41 Air Wash: less than 0.007 inches of water, C-41 Coating: less than 0.146 inches of water and greater than 0.015 inches of water, and C-41 Cooling: greater than 0.053 inches of water), the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below the 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable response steps. A temperature reading that is below 900°F, or the minimum temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C-Reponse to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

~~L.2.13 VOC emissions from C-42 Coating Process [40 CFR 64]~~

~~Whenever the C-42 coating process is operating using VOC-based coating,~~**;**
~~the~~ **The** ~~Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when C-42 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.007 inches water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.~~

L.2.13 VOC emissions from C-42 Coating Process [40 CFR 64]

Whenever the C-42 coating process is operating using VOC-based coating:

(a) The Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when C-42 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.007 inches of water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable response steps. A temperature reading that is below 900°F, or the minimum temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

~~L.2.14 VOC emissions from S-4 Coating Process [40 CFR 64]~~

~~Whenever the S-4 coating process is operating using VOC-based coating,;~~
~~the **The** Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when S-4 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.002 inches water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.~~

L.2.14 VOC emissions from S-4 Coating Process [40 CFR 64]

Whenever the S-4 coating process is operating using VOC-based coating:

(a) The Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when S-4 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.002 inches of water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable response steps. A temperature reading that is below 900°F, or the temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C-Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

~~L.2.15 VOC emissions from S-5 Coating Process [40 CFR 64]~~

~~Whenever the S-5 coating process is operating using VOC-based coating,; the **The** Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when S-5 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.002 inches water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.~~

L.2.15 VOC emissions from S-5 Coating Process [40 CFR 64]

Whenever the S-5 coating process is operating using VOC-based coating:

(a) The Permittee shall monitor and record the pressure differential between the inside and outside of the enclosure at least once every 15 minutes. All values recorded when S-5 is operating are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When for any 3-hour rolling average value of the pressure differential the pressure inside the enclosure is not at least 0.002 inches of water less than the pressure outside the enclosure, the Permittee shall take reasonable response steps. A parameter reading that is outside the established range is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

(b) After start-up of SHEETFUMES TO the Permittee shall, at least once every 15 minutes, monitor and record the temperature that indicates proper performance of the SHEETFUMES TO. All values recorded during an hour when SHEETFUMES is operating while using VOC-based coatings and the emissions are vented to the SHEETFUMES TO are to be used to calculate an hourly average. A 3-hour rolling average will be calculated from the arithmetic average of three consecutive one-hour averages. When any 3-hour rolling average value (arithmetic average of three consecutive one-hour averages) falls below 900°F, or the temperature demonstrated during a performance test, the Permittee shall take reasonable

response steps. A temperature reading that is below 900°F, or the minimum temperature demonstrated during a performance test, is not a deviation from this permit. Failure to take response steps shall be considered a deviation of this condition. Section C-Reponse to Excursions or Exceedances contains the Permittee's obligations with regard to taking the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

L.2.16 Record Keeping Requirements

(a) In order to document the compliance status with Conditions L.2.1 and L.2.4 the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (3) shall be maintained for each calendar month and shall be sufficient to establish compliance with the VOC **input** ~~usage~~ limits and~~/or~~ the VOC emission limits established in Conditions L.2.1 and L.2.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

****

(8) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.12.

(9) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.13.

(10) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.14.

(11) After startup of SHEETFUMES TO: Records of the values used to calculate the hourly average and 3-hour rolling average temperatures monitored pursuant to Condition L.2.15.

****

(e) All records required to be ~~maintained~~ **made** by Condition**s** L.2.12**, L.2.13, L.2.14, and L.2.15** shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

L.2.17 Reporting Requirements

(a) In accordance with 40 CFR 64, the Permittee shall submit monitoring reports for the pressure differentials **and SHEETFUMES TO temperature** required to be **monitored** ~~monitoried~~ by Conditions L.2.12, L.2.13, L.2.14 and L.2.15. The reports shall be submitted at least every 6 months and include the following information, as applicable:

****

Results of monitoring of pressure differentials **or SHEETFUMES TO temperature**, as required by Conditions L.2.12, L.2.13, L.2.14 and L.2.15, **that are out-of-range** are not excursions and do not require excursion reporting if the results did not require response steps in accordance with Section C – Response to Excursions or Exceedances. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~).

(b) A quarterly summary of the information to document the compliance status with Condition**s** L.2.1(a) **(b) and (c)**, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(**35**~~34~~). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

****

SECTION L.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: Structured Products, Building 4

Temporary Boiler

(d) The boiler listed below represents a temporary, portable steam generating unit for Structured Products. The stack/vent I.D.; emission unit description; maximum heat capacity; and date of construction are in the table.

Significant Activities[(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Maximum Capacity	Date of Construct
10-500	TEMPBOILER	Small natural gas or No.2 fuel oil fired boiler	10.468 MMBtu/hr	N/A

(a) Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

****

Section L consists of the following Sections: L.1, L.2, L.3 and **five (5)** ~~one (1)~~ Part 70 ~~Usage Reporting Form, and one (1) Part 70~~ Quarterly Reporting Form**s**.

Condition L.3.6 concludes the Section L requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition L.2.1(a)
Facility: SHEETFUMES from C-41 and C-42 coating lines
Parameter: VOC
Limit: The input of volatile organic compound (VOC) to the C-41 and C-42 coating lines shall be limited to a total of 490 tons per twelve (12) consecutive month period.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this **reporting period** ~~month~~.
☐ Deviation/s occurred in this **reporting period** ~~month~~.
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: **SABIC Innovative Plastics Mt. Vernon, LLC**
Source Address: **1 Lexan Lane, Mt. Vernon, Indiana 47620**
Part 70 Permit No.: **T129-30384-00002; Condition L.2.1(d)**
Facility: **SHEETFUMES from C-41 and C-42 coating lines**

Parameter: **VOC**
Limit: **The input of volatile organic compound (VOC) to the C-41, C-42, S-4, and S-5 coating lines shall be limited to a total of 543 tons per twelve (12) consecutive month period.**

YEAR: _____ **QUARTER:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this reporting period.**
☐ **Deviation/s occurred in this reporting period.**
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Usage Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition L.3.4
Facility: Temporary Boiler, identified as TEMPBOILER
Parameter: Hours of Usage
Limit: Less than 1,500 hours per twelve (12) consecutive month period.

YEAR: _____ QUARTER:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total

Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this **reporting period** ~~month~~.
☐ Deviation/s occurred in this **reporting period** ~~month~~.
Deviation has been reported on:

Submitted by:

Title / Position:

Signature:

Date:

Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 ~~Usage~~ Monitoring Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition L.2.17(a)
Facility: C-41, C-42, S-4, and S-5 coating lines **(SHEETFUMES)**
Parameter: Pressure Differentials (Inches of Water)
Limit: 3-hour rolling average value of the pressure differential (C-41 Air Wash: less than 0.007" H2O, C-41 Coating: less than 0.146" H2O and greater than 0.015" H2O, C-41 Cooling: greater than 0.053" H2O, C-42: less than 0.007" H2O, S-4: less than 0.002" H2O, S-5: less than 0.002 "H2O).

YEAR: _____ QUARTER:_____

Date of Excursion or Exceedance	Number	Duration	~~Casue~~ **Cause** of Excursion ~~of~~ **or** Exceedance	Corrective Action Taken

☐ No deviation occurred in this **reporting period** ~~quarter~~.
☐ Deviation/s occurred in this **reporting period** ~~month~~.

Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

AFTER Start-up of SHEEETFUMES TO
Part 70 Monitoring Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002 Condition L.2.17 (a)
Facility: SHEETFUMES TO
Parameter: Temperature that indicates proper performance of SHEETFUMES TO
Limit: 3-hour rolling average value of the temperature that indicates proper performance of SHEETFUMES TO as specified or recommended by the thermal oxidizer's manufacturer or demonstrated during a performance test

YEAR: _____ QUARTER:_____

Date of Excursion or Exceedance	Number	Duration	Cause of Excursion or Exceedance	Corrective Action Taken

☐ **No deviation occurred in this reporting period.**
☐ **Deviation/s occurred in this reporting period.**

Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

Change 11: New conditions from 40 CFR 63, Subpart DDDDD have been added to Section N of the permit accordingly.

SECTION N.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source or affected facility subject to the applicable regulation.

(a) The affected facilities subject to 40 CFR 60, Subpart RRR are identified as CppR-710E and CppR-710PE. Each affected facility consists of unit operations in which one or more chemicals or reactant**s** other **than** air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed, plus any associated equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

****

(d) ~~[Reserved]~~ **The CPP Resin area includes process heaters, identified as H-390 and H-109, which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-390 and H-109 (unit designed to burn gas 1 subcategory), are specified in Section D of this permit.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

N.1.1 ~~[Reserved]~~ **National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]**

The requirements of 40 CFR Part 63, Subpart DDDDD apply to H-390 and H-109 as specified in Section D.1 of this permit.

****

N.1.2 VOC Emissions from Synthetic Organic Chemical Manufacturing Industry [326 IAC 12][40 CFR 60, Subpart RRR][40 CFR 60, Subpart NNN]

(a) The Permittee shall comply with the requirements of 40 CFR 60, Subpart RRR for each of the affected facilities CppR-710E and CppR-710PE by following one of the compliance options below for each affected facility:

(1) Pursuant to 40 CFR 60.700(c)(5), if the Permittee routes the vent ~~strem~~ **stream** from the reactor process to a distillation unit subject to 40 CFR 60 Subpart NNN, and the vent stream has no other releases to the air except for a pressure relief valve, then the affected facility is exempt from all provisions of subpart RRR except for 40 CFR 60.705(r).

****

N.1.9 Record Keeping and Reporting Requirements

(a) The table that follows provides record keeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, that apply to affected facilities CppC-310, CppC-610, CppC-712, CppR-710E, CppR-710PE, and CppVV. After the compliance dates specified in 40 CFR 63.2445, for any or all of the affected facilities, CppC-310, CppC-610, CppC-712, CppR-710E, CppR-710PE and CppVV, the Permittee may elect to comply with applicable requirements in 40 CFR Part 63, Subpart FFFF as provided in 40 CFR 63.2535(h) and (k); and the requirements set forth in this condition will no longer apply to such affected facility.

****

(d) Pursuant to 40 CFR 60.705(r) and if the Permittee chooses the compliance option to comply with Subpart RRR in accordance with 40 CFR 60.700(c)(5) as provided in Condition N.1.2(a)**(1)**, the Permittee must submit the process design description to IDEM ~~OQA~~ **OAQ** and retain it for the life of the process.

SECTION N.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: CPP Resin, Buildings 28, 34, and 60

CPP Resin Leak Detection and Repair (LDAR) Components

(g) LDAR applies to the collection of all equipment (as defined in 40 CFR 60.481) located in the CppVV affected facility. This equipment includes each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector that is in VOC service. In VOC service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VOC. [40 CFR 60.481]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

****

Section N consists of the following Sections: N.1, N.2, N.3, N.4, and one (1) Part 70 Quarterly Reporting Form.

Condition N.4.2 concludes the Section N requirements of this permit

Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002
Facility: V-301; S/V 12-560; Condition N.3.2(a)
Parameter: VOC
Limit: 24.0 tons of VOC per 12**-** month period, with compliance determined at the end of each month.

QUARTER: YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 **-** Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this **reporting period** ~~month~~.
☐ Deviation/s occurred in this **reporting period** ~~month~~.
Deviation has been reported on:

Submitted by:

Title / Position:

Signature:

Date:

Phone:

Change 12: New conditions from 40 CFR 63, Subpart DDDDD have been added to Section Q of the permit accordingly.

SECTION Q.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]: HPP ChemOps, Buildings 58 and 59

HPP ChemOps Affected Facilities/Sources

This section lists the provisions of applicable National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to the affected source or affected facility subject to the applicable regulation.

(a) ~~[Reserved]~~ **The HPP ChemOps area includes process heaters, identified as H-900 and H-900B, which are part of an existing affected source subject to 40 CFR 63, Subpart DDDDD. An existing affected source subject to 40 CFR 63, Subpart DDDDD is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in 40 CFR 63.7575. Boilers and process heaters subject to 40 CFR 63, Subpart DDDDD are categorized in Section D of this Part 70 permit. The requirements of 40 CFR 63, Subpart DDDDD, that are applicable to H-900 and H-900B are specified in Section D of this permit.**

(b) The HPP ChemOps Area includes two miscellaneous organic chemical manufacturing units (MCPU) which are part of the affected source Plant-MON subject to 40 CFR 63, Subpart FFFF. The miscellaneous organic chemical manufacturing units are identified as HppMONMon1 and HppMONPol1. The affected source subject to 40 CFR 63, Subpart FFFF is the facility wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials in 40 CFR 63.2435(b)(1). MCPUs subject to 40 CFR 63, Subpart FFFF are categorized in Section V of this permit. The requirements of 40 CFR 63, Subpart FFFF which are applicable to HppMONMon1 and HppMONPol1 are specified in Section V of this permit.

(c) [Reserved]

(d) The affected facilities subject to 40 CFR 60, Subpart Dc are identified as H-900 and H-900B. The affected facility is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

Q.1.1 ~~[Reserved]~~ **National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]**

The requirements of 40 CFR Part 63, Subpart DDDDD apply to H-900 and H-900B as specified in Section D.1 of this permit.

****

Change 13: Six (6) Compression Ignition engines have been removed from the source.

SECTION S.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Emergency Generators and Pumps, Entire Plant Site

Standby Energy Curtailment Generators and Mobile Diesel Units

(b) The generators and mobile diesel units listed below are considered the energy curtailment generators and mobile diesel units identified as a group, 17-S_M-G. Each energy curtailment generator or mobile diesel unit which is associated with this group is individually identified with an affiliated stack/vent I.D; plant location; date in which the energy curtailment generator or mobile diesel unit was installed; rated horsepower (hp); and heat input.

Stack / Vent I.D	Plant Location	Date Installed	Rated HP	MMBTU/hr
STANDBY ENERGY CURTAILMENT DIESEL GENERATORS AND MOBILE DIESEL UNITS				
17-116	CPP Resin III	1984	1580	11.2
17-117	CPP Resin III	1984	1580	11.2
17-118	WWTP Lift Station	1990	2220	15.7
17-119	WWTP Lift Station	1990	2220	15.7
~~17-125~~	~~Substation 2~~	~~1994~~	~~2161~~	~~15.3~~
~~17-126~~	~~Substation 2~~	~~1994~~	~~2161~~	~~15.3~~
~~17-127~~	~~Substation 2~~	~~1994~~	~~1503~~	~~10.6~~
~~17-131~~	~~Substation 1~~	~~1995~~	~~2161~~	~~15.3~~
~~17-132~~	~~Substation 1~~	~~1995~~	~~2161~~	~~15.3~~
~~17-133~~	~~Substation 1~~	~~1995~~	~~2161~~	~~15.3~~

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

****

.

SECTION S.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Stationary Internal Combustion Engines (ICE), Entire Plant Site

Plant-Existing, New, Modified or Reconstructed Stationary ICE Affected Facilities/Sources

This section lists the provisions of National Emission Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS) that apply to the Permittee independent of the applicability of specific provisions to individual equipment or emission units. These provisions apply to any existing, new, modified, or reconstructed affected source subject to the applicable regulation.

The table lists emission units that are stationary internal combustion engines.

Stack / Vent I.D	Plant Location	Fuel	Type of ICE*	Rated HP
GENERATORS				
**********	**********	**********	**********	**********
STANDBY ENERGY CURTAILMENT DIESEL GENERATORS AND MOBILE DIESEL UNITS				
17-116	CPP Resin III	Diesel	CI	1580
17-117	CPP Resin III	Diesel	CI	1580
17-118	WWTP Lift Station	Diesel	CI	2220
17-119	WWTP Lift Station	Diesel	CI	2220
~~17-125~~	~~Substation 2~~	~~Diesel~~	~~CI~~	~~2161~~
~~17-126~~	~~Substation 2~~	~~Diesel~~	~~CI~~	~~2161~~
~~17-127~~	~~Substation 2~~	~~Diesel~~	~~CI~~	~~1503~~
~~17-131~~	~~Substation 1~~	~~Diesel~~	~~CI~~	~~2161~~
~~17-132~~	~~Substation 1~~	~~Diesel~~	~~CI~~	~~2161~~
~~17-133~~	~~Substation 1~~	~~Diesel~~	~~CI~~	~~2161~~
17-134	Medical	Diesel	CI	2161

* CI = Combustion Ignition; SI = Spark Ignition
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]
****

Change 14: The new Boiler identified as AUX BOILER AUX2 BOILER CG1 BOILER and the natural gas-fired COGEN, identified as COGEN with their conditions have been added to Section W of the permit accordingly.

SECTION W.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: COGEN AUX BOILER

(a) The natural gas-fired AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) as identified below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in this section.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to an affected source, as defined pursuant to the NESHAP. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is a new affected source subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section D.1 of this permit.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
19-002	AUX BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-004	AUX2 BOILER*	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-005	CG1 BOILER*	Natural gas-fired boiler with low-NOx burner	None	None	249 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

*** AUX2 BOILER and CG1 BOILER are part of the AOS in W.1.19.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Construction Conditions

General Construction Conditions

W.1.1 Permit No Defense [326 IAC 2-2-8]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

W.1.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

W.1.3 Modifications to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operating Conditions

Emission Limitations and Standards [326 IAC 2-7-5(1)]

W.1.4 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (Prevention of Significant Deterioration) for the pollutant Greenhouse Gases (GHGs), the best available control technology (BACT) for the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) shall be as follows:

(a) AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall fire natural gas only;

(b) Boiler insulation including energy efficient refractory shall be installed for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(c) The AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall achieve a minimum 80% thermal efficiency (HHV);

(d) Improved Combustion Measures: Combustion Tuning for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(e) Optimization and digital control system instrumentation for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(f) Minimize of air infiltration for AUX BOILER (and AUX2 BOILER and CG1 BOILER if

W.1.19 is elected);

(g) Perform boiler tune-ups pursuant to 40 CFR 63 Subpart DDDDD for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(h) Operating and maintenance practices pursuant to 40 CFR 63 Subpart DDDDD for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(i) Steam line maintenance: insulation of new steam and new hot water lines for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected);

(j) Total emissions from AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler with compliance determined on a monthly basis.

(j) Air preheater or economizer for CG1 BOILER only, if CG1 BOILER is operated as a primary use boiler, if W.1.19 is elected.

W.1.5 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

(a) The CO emissions from the COGEN Project shall be limited as follows:

(1) The total CO emissions from the COGEN Project (COGEN Project consists of BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO, COGEN, and AUX BOILER) shall be limited to less than 360 tons CO per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) When W.1.19 is elected and the COGEN Project consists of COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO, the CO net emissions increase shall be limited to less than 360 tons CO per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this Condition and Conditions D.3.3(a), L.2.1(d), and W.2.4(b) ensures that the net emission increase of CO from the COGEN Project is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable to the COGEN Project modification.

(b) The VOC emissions from the COGEN Project shall be limited as follows:

(1) The total VOC emissions from the COGEN Project (COGEN Project consists of: BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO, COGEN, AUX BOILER) shall be limited to less than 39.6 tons VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) When W.1.19 is elected and the COGEN Project consists of COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO, the net emissions increase from the COGEN Project, as defined pursuant to 326 IAC 2-2-1(ii), shall be limited less more than 39.6 tons VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this Condition and Conditions D.3.3(b), L.2.1(e), and W.2.4(c) ensures that the net emission increase of VOC from the COGEN Project is below PSD significant emission levels and renders the requirements of 326 IAC 2-2 Preventions of Significant Deterioration (PSD) not applicable to the COGEN Project modification.

W.1.6 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12]

The table that follows sets forth provisions of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1 that apply to each affected facility AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected).

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
60.11(a)	Compliance with standards and maintenance requirements	X	X	X
60.11(d)	Compliance with standards and maintenance requirements	X	X	X
60.13(a)	Monitoring requirements	X	X	X
60.13(b)	Monitoring requirements	X	X	X
60.13(c)	Monitoring requirements	X	X	X
60.13(d)	Monitoring requirements	X	X	X
60.13(e)	Monitoring requirements	X	X	X
60.13(f)	Monitoring requirements	X	X	X
60.13(g)	Monitoring requirements	X	X	X
60.13(h)	Monitoring requirements	X	X	X

*** AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.**

W.1.7 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 40 CFR 60.44b(a) and 326 IAC 12, nitrogen oxide (NOx) emissions from AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be limited to 0.2 pounds per million Btu of heat input. The table that follows provides the specific applicable standards and monitoring provisions that apply to this boiler and the condition number where a description of the provisions can be found in Section II.

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.1(a)	60.44b(a)	Standard for Nitrogen Oxides	X	X	X
II.1(h)	60.44b(h)	Standard for Nitrogen Oxides	X	X	X
II.1(i)	60.44b(i)	Standard for Nitrogen Oxides	X	X	X

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.2(b)	60.48b(b)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(c)	60.48b(c)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(d)	60.48b(d)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(e)	60.48b(e)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(f)	60.48b(f)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X
II.2(g)	60.48b(g)	Emission Monitoring for Particulate Matter and Nitrogen Oxides	X	X	X

*** AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.**

W.1.8 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) shall not exceed 0.14pounds per million Btu heat input (lb/MMBtu).

W.1.9 National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR 63, Subpart DDDDD]

The requirements of 40 CFR 63, Subpart DDDDD applicable to AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) are specified in Section D.1 of this permit.

Compliance Determination Requirements

W.1.10 Methods and Procedures [326 IAC 12] [40 CFR 60, Subpart Db]

Pursuant to 40 CFR 60, Subpart Db, compliance determination requirements for AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) are identified in the following table:

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.3(c)	60.46b(c)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X
II.3(e)(4)	60.46b(e)(4)	Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides	X	X	X

*** AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.**

W.1.11 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 12] [40 CFR 60, Subpart Db] [326 IAC 2-2]

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 40 CFR 60.48b (Emission Monitoring for Particulate Matter and Nitrogen Oxides) and in order to demonstrate compliance with Condition W.1.6, a continuous monitoring system that meets the performance specifications of 326 IAC 3-5-2 shall be installed, calibrated, maintained, and operated on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) for measuring NOx.

W.1.12 NOx Monitoring System Downtime [326 IAC 2-2] [326 IAC 12] [40 CFR 60, Subpart Db]

In instances of NOx continuous emission monitoring system (CEMS) downtime, the Permittee shall obtain NOx emissions data according to the requirements of 40 CFR 60.48b(f).

W.1.13 Opacity [326 IAC 5-1]

In order to demonstrate compliance with 326 IAC 5-1, AUX BOILER shall only burn natural gas.

W.1.14 Testing Requirements

(a) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected), in order to demonstrate compliance with Condition W.1.5(a), the Permittee shall conduct a performance test to verify the CO emission factors for emissions unit AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) using methods as approved by the Commissioner. The test on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(b) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected), and in order to demonstrate compliance with Condition W.1.5(b), the Permittee shall conduct a performance test to verify the VOC emission factors for emissions unit AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) using methods as approved by the Commissioner. The test on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(c) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected), and in order to demonstrate compliance with Condition W.1.4(c), the Permittee shall perform thermal efficiency testing once on AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 elected) utilizing methods as approved by the Commissioner. The test on the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

W.1.15 Greenhouse Gases (GHGs) Calculations

To determine the compliance status with Condition W.1.4, the following equation shall be used to determine the CO2e emissions from the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected):

CO2e emissions (tons/month, per boiler) = [(Fuel Usage x Heat Content) x (CO2 EF (lb/MMBtu) x CO2 GWP + CH4 EF x CH4 GWP + N2O EF x N2O GWP)] x 1 ton/2000 lb

Where:

Fuel Usage (MMScf/month) = monthly actual fuel usage
Heat Content (MMBtu/MMScf) = standard value in AP-42 for natural gas or vendor data, if available
CO2 EF (lb/MMBtu) = emission factor from Greenhouse Gas Mandatory Reporting Rule (40 CFR 98, Subpart C) for natural gas
CH4 EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
N2O EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
CO2 GWP = global warming potential from 40 CFR 98, Subpart A
CH4 GWP = global warming potential from 40 CFR 98, Subpart A
N2O GWP = global warming potential from 40 CFR 98, Subpart A

W.1.16 Carbon Monoxide (CO) Calculations

To determine the compliance status with Condition W.1.5(a), the following equation shall be used to determine the CO emissions from the COGEN Project:

CO emissions (tons/month) =
{[(Fuel Usage$_{AUX\ BOILER}$) x (CO EF$_{AUX\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{AUX2\ BOILER}$) x (CO EF$_{AUX2\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{CG1\ BOILER}$) x (CO EF$_{CG1\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{COGEN}$) x (CO EF$_{COGEN}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{BW\text{-}1\ BOILER}$) x (CO EF$_{AP\text{-}42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf

of natural gas)$_{AP-42}$] +
[(Fuel Usage$_{BW-2\ BOILER}$) x (CO EF$_{AP-42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP-42}$] +
[(Fuel Usage$_{SHEETFUMES}$) x (CO EF$_{AP-42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP-42}$]}/(2000 lbs/ton)

Where:

Fuel Usage$_{AUX\ BOILER}$ = MMScf/month actual fuel usage for AUX BOILER
CO EF$_{AUX\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
CO EF$_{AUX2\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
CO EF$_{CG1\ BOILER}$ = 0.037 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
(Btu /Scf of natural gas) $_{SABIC}$ = Heat content, in Btu/Scf, of natural gas from AP-42 or vendor data
Fuel Usage$_{COGEN}$ = MMScf/month actual fuel usage for COGEN
CO EF$_{COGEN}$ = 0.0055 lbs CO/MMBtu, emission factor from vendor data or most recent stack test
Fuel Usage$_{BW-1\ BOILER}$ = MMScf/month actual natural gas fuel usage for BW1-BOILER
Fuel Usage$_{BW-2\ BOILER}$ = MMScf/month actual natural gas fuel usage for BW2-BOILER
CO EF$_{AP-42}$ = 84 lbs CO/MMScf emission factor from AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1
(1,020 MMBtu/MMScf of natural gas)$_{AP-42}$ = 1,020 MMBtu/MMScf heat content of natural gas from AP-42 Chapter 1.4 Natural gas Combustion

W.1.17 Volatile Organic Compounds (VOC) Calculations

To determine the compliance status with Condition W.1.5(b), the following equation shall be used to determine the VOC emissions from the COGEN Project:

VOC emissions (tons/month) =
{[(Fuel Usage$_{AUX\ BOILER}$) x (VOC EF$_{AUX\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{AUX2\ BOILER}$) x (VOC EF$_{AUX2\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{CG1\ BOILER}$) x (VOC EF$_{CG1\ BOILER}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{COGEN}$) x (VOC EF$_{COGEN}$) x (Btu /Scf of natural gas) $_{SABIC}$] +
[(Fuel Usage$_{BW-1\ BOILER}$) x (VOC EF$_{AP-42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP-42}$] +
[(Fuel Usage$_{BW-2\ BOILER}$) x (VOC EF$_{AP-42}$) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP-42}$] +
[(Fuel Usage$_{SHEETFUMES}$, MMScf/month) x (VOC EF$_{AP-42}$, lb/MMScf) x (Btu /Scf of natural gas) $_{SABIC}$ / (1,020 MMBtu/MMScf of natural gas)$_{AP-42}$]}/(2000 lbs/ton)

Where:

Fuel Usage$_{AUX\ BOILER}$ = MMScf/month actual fuel usage for AUX BOILER
VOC EF$_{AUX\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
VOC EF$_{AUX2\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
VOC EF$_{CG1\ BOILER}$ = 0.002 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
(Btu /Scf of natural gas)$_{SABIC}$ = Heat content, in Btu/Scf, of natural gas from AP-42 or vendor data
Fuel Usage$_{COGEN}$ = MMScf/month actual fuel usage for COGEN

VOC EF_{COGEN} = 0.0025 lbs VOC/MMBtu, emission factor from vendor data or most recent stack test
Fuel $Usage_{BW\text{-}1\ BOILER}$ = MMScf/month actual fuel usage for BW1-BOILER
Fuel $Usage_{BW\text{-}2\ BOILER}$ = MMScf/month actual fuel usage for BW2-BOILER
VOC $EF_{AP\text{-}42}$ = 5.5 lbs VOC/MMScf emission factor from AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2
$(1{,}020\ MMBtu/MMScf\ of\ natural\ gas)_{AP\text{-}42}$ = 1,020 MMBtu/MMScf heat content of natural gas from AP-42 Chapter 1.4 Natural gas Combustion

Record Keeping and Reporting Requirements [326 IAC 2- 7- 5(3)]

W.1.18 Record Keeping and Reporting Requirements

(a) The table that follows provides recordkeeping and reporting requirements of 40 CFR 60, Subpart A - General Provisions, incorporated by reference in 326 IAC 12-1, that apply to AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected).

Applicable 40 CFR Part 60, Subpart A Requirement	Regulatory Citation Description	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
60.7(a)	Notification and record keeping	X	X	X
60.7(b)	Notification and record keeping	X	X	X
60.7(c)	Notification and record keeping	X	X	X
60.7(d)	Notification and record keeping	X	X	X
60.7(f)	Notification and record keeping	X	X	X
60.7(g)	Notification and record keeping	X	X	X

*** AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.**

(b) Pursuant to 40 CFR 60, Subpart Db and to document compliance with Condition W.1.7, the Permittee shall keep records and submit reports as specified in the following federal citations.

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.4(d)	60.49b(d)	Reporting and Recordkeeping Requirements	X	X	X
II.4(g)	60.49b(g)	Reporting and Recordkeeping Requirements	X	X	X
II.4(h)	60.49b(h)	Reporting and Recordkeeping Requirements	X	X	X
II.4(i)	60.49b(i)	Reporting and Recordkeeping Requirements	X	X	X

Section II Permit Condition	Applicable 40 CFR Part 60, Subpart Db Requirement	Regulatory Citation Title	AUX BOILER	AUX2 BOILER*	CG1 BOILER*
II.4(v)	60.49b(v)	Reporting and Recordkeeping Requirements	X	X	X
II.4(w)	60.49b(w)	Reporting and Recordkeeping Requirements	X	X	X

*** AUX2 BOILER and CG2 BOILER are part of the AOS in W.1.19.**

(c) To document the compliance status with Condition W.1.7, the Permittee shall maintain records of all NOx continuous emissions monitoring data, pursuant to 326 IAC 3-5-6.

(d) A quarterly summary of the information to document the compliance status with Condition W.1.11 shall be submitted using the reporting forms located at the end of Section W of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(e) Pursuant to 326 IAC 3-5-7(c)(4) and to comply with W.1.11, reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, shall include the following:

(1) Date of downtime.

(2) Time of commencement.

(3) Duration of each downtime.

(4) Reasons for each downtime.

(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by a "responsible official" as defined by 326 IAC 2-7-1(35).

(f) To document the compliance status with Condition W.1.4(a) - GHGs PSD BACT, the Permittee shall maintain the monthly records of the total CO2e emissions from the AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected).

(g) To document the compliance status with Condition W.1.5(a) - PSD for CO emissions, the Permittee shall maintain the monthly records of the total CO emissions from the COGEN Project calculated in W.1.16.

(h) To document the compliance status with Condition W.1.5(b) - PSD for VOC emissions, the Permittee shall maintain the monthly records of the total VOC emissions from the COGEN Project calculated in W.1.17.

(i) A quarterly summary of the information to document the compliance status with the CO limit in Condition W.1.5(a) shall be submitted using the reporting forms located at the end of permit Section W, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(j) A quarterly summary of the information to document the compliance status with the VOC limit in Condition W.1.5(b) shall be submitted using the reporting forms located at the end of permit Section W, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(k) All records required to be maintained by Condition W.1.18 shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

(l) The Permittee shall submit the reports and records required to be submitted by Condition W.1.18 to the address listed in Section C. Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

W.1.19 Alternative Operating Scenarios [326 IAC 2-7-20(d)]

(a) As an alternative to the operational configuration for the COGEN Project, as set forth in Section W of this permit, the facility may, at a later date, elect to construct and install two additional natural gas-fired boilers, AUX2 BOILER and CG1 BOILER, each rated at a maximum of 249 MMBtu/hr with concurrent shutdown of BW-1 BOILER and BW-2 BOILER.

(b) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it is operating.

SECTION W.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]: COGEN

(a) The natural gas-fired COGEN emission unit is located in the COGEN Area as identified below. COGEN consists of a natural gas-fired turbine and a heat recovery steam generator (HRSG) with duct burner. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to the affected facility. COGEN is an affected facility pursuant to 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary

Combustion Turbines. The requirements of 40 CFR 60, Subpart KKKK, that are applicable to COGEN (including the HRSG with Duct Burner), are specified in this section of the permit. Because the requirements of 40 CFR 60, Subpart KKKK, apply to COGEN (including the HRSG with Duct Burner), the requirements of 40 CFR 60, Subpart Db, are not applicable to the Duct Burner.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the affected source. COGEN is an affected source pursuant to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The requirements of 40 CFR 63, Subpart YYYY, that are applicable to COGEN are specified in this section of the permit. Pursuant to 40 CFR 63.6095(d), Stay of standards for gas-fired subcategories, the COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

(d) Pursuant to the definitions contained in 40 CFR 63.7575, waste heat boilers are excluded from the definition of "boiler". Waste heat boilers are defined to include duct burners; therefore, the HRSG, a waste heat boiler with duct burner, is not considered an affected source pursuant to 40 CFR 63, Subpart DDDDD.

(e) Pursuant to 40 CFR 63.6092, the HRSG with duct burner is not considered an affected source pursuant to 40 CFR 63, Subpart YYYY.

Significant Activities [(a)]

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices[(b)]	Maximum Capacity [(c)]	Date of Construct
19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).	Oxidation Catalyst	None	1,812 MMBtu/hr	NA

a. Emission unit is not defined as an insignificant activity (326 IAC 2-7-1(21)) or trivial activity (326 IAC 2-7-1(40))
b. Equipment is integral to the process operation.
c. When applicable, the maximum capacity is either the maximum process input rate; the maximum tank volume capacity; or the maximum heat input rate.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Construction Conditions

General Construction Conditions

W.2.1 Permit No Defense [326 IAC 2-2-8]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated there under, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

W.2.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

W.2.3 Modifications to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operating Conditions

Emission Limitations and Standards [326 IAC 2-7-5(1)]

W.2.4 Prevention of Significant Deterioration (PSD) [326 IAC 2-2-3]

Pursuant to PSD 326 IAC 2-2-3 (Prevention of Significant Deterioration) for the pollutant GHGs, the best available control technology (BACT) for the COGEN shall be as follows:

(a) COGEN shall use natural gas only.

(b) COGEN shall achieve a minimum net plant efficiency of 85% (LHV); and

(c) The total CO2e emissions from COGEN shall be limited to 937,379 tons of CO2e per twelve (12) consecutive month period with compliance determined on a monthly basis.

W.2.5 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

(a) COGEN's CO emissions are limited pursuant to Condition W.1.5(a).

(b) COGEN's VOC emissions are limited pursuant to Condition W.1.5(b).

W.2.6 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the duct burner of COGEN shall not exceed 0.14 pounds per million Btu heat input (lb/MMBtu).

W.2.7 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1-1, apply to the COGEN affected facility, except when otherwise specified in 40 CFR 60, Subpart KKKK.

W.2.8 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4320 and 326 IAC 12, nitrogen oxide (NOx) emissions from COGEN shall be limited to the following:

15 ppm at 15 percent O2, or

54 ng/J of useful output (0.43 lb/MWh)

W.2.9 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4320 and 326 IAC 12, nitrogen oxide (NOx) emissions from the COGEN HRSG Duct Burner shall be limited to the following:

54 ppm at 15 percent O2, or

110 ng/J of useful output (0.86 lb/MWh)

W.2.10 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4330 and 326 IAC 12, the COGEN Sulfur Dioxide (SO_2) emissions shall either be limited to 110 ng SO2/J (0.90 lbs SO2/MWh) gross output, or any fuel burned in the stationary combustion turbine shall not contain total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2 /MMBtu) heat input.

W.2.11 New Source Performance Standard (NSPS) [326 IAC 12] [40 CFR 60, Subpart KKKK]

Pursuant to 40 CFR 60.4300 and 326 IAC 12, the table that follows provides the specific applicable standards and monitoring provisions that apply to the COGEN affected facility. Applicable definitions are set forth in 40 CFR 63.4420.

Applicable 40 CFR 60 Subpart KKKK Requirement	Regulatory Citation Title
60.4305(a and b)	Does this subpart apply to my stationary combustion turbine?
60.4315	What pollutants are regulated by this subpart?
60.4320	What emission limits must I meet for nitrogen oxides (NOx)?
60.4330	What emission limits must I meet for sulfur dioxide (SO2)
60.4333	What are my general requirements for complying with this subpart?
60.4340	How do I demonstrate continuous compliance for NOx if I do not use water or steam injection?
60.4345	What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?
60.4350	How do I use data from the continuous emission monitoring equipment to identify excess emissions?
60.4355	How do I establish and document a proper parameter monitoring plan?
60.4360	How do I determine the total sulfur content of the turbine's combustion fuel?
60.4365	How can I be exempted from monitoring the total sulfur content of the fuel?
60.4370	How often must I determine the sulfur content of the fuel?
60.4375	What reports must I submit?
60.4380	How are excess emissions and monitor downtime defined for NOx?
60.4385	How are excess emissions and monitoring downtime defined for SO2?
60.4395	When must I submit my reports?
60.4400	How do I conduct the initial and subsequent performance tests, regarding NOx?

Applicable 40 CFR 60 Subpart KKKK Requirement	Regulatory Citation Title
60.4405	How do I perform the initial performance test if I have chosen to install a NOx-diluent CEMS?
60.4410	How do I establish a valid parameter range if I have chosen to continuously monitor parameters?
60.4415	How do I conduct the initial and subsequent performance tests for sulfur?

W.2.12 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart YYYY] [326 IAC 20-1]

Pursuant to 40 CFR 63.6165 and Table 7 of Subpart YYYY of Part 63, the Permittee shall comply with the applicable provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1.

W.2.13 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP) is required for the COGEN and Oxidation Catalyst. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

W.2.14 Opacity [326 IAC 5-1]

In order to demonstrate compliance with 326 IAC 5-1, COGEN (including duct burner) shall only burn natural gas.

W.2.15 Alternative Operating Scenarios [326 IAC 2-7-20(d)]

(a) As an alternative to the operational configuration for the COGEN, as currently limited in Section W.2 of this permit, the facility may, at a later date, elect to construct and install an SCR unit to further reduce NOx emissions from the COGEN.

(b) When the alternative operating scenario provided in W.2.15(a) is elected by the Permittee, the NOx emissions from the COGEN shall be controlled by selective catalytic reduction (SCR) at all times the COGEN is in operation.

(c) Pursuant to 326 IAC 2-7-20(d) and 326 IAC 2-7-5(9), if an alternative operating scenario is applicable, the Permittee shall keep a record of the scenario it is operating under.

W.2.16 Oxidation Catalyst

The oxidation catalyst shall be in operation at all times when the COGEN emission unit is in operation.

W.2.17 Greenhouse Gases (GHGs) Calculations

To determine the compliance status with Condition W.2.4, the following equation shall be used to determine the CO2e emissions from the COGEN emission unit:

CO2e emissions (tons/month) = [(Fuel Usage x Heat Content) x (CO2 EF x CO2 GWP + CH4 EF x CH4 GWP + N2O EF x N2O GWP)] x 1 ton/2000 lb

Where:

Fuel Usage (MMScf/month) = monthly fuel usage data from company records
Heat Content (MMBtu/MMScf) = standard value in AP-42 for natural gas or vendor data, if available
CO2 EF (lb/MMBtu) = emission factor from Greenhouse Gas Mandatory Reporting Rule (40 CFR 98, Subpart C) for natural gas
CH4 EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
N2O EF (lb/MMBtu) = emission factor from 40 CFR 98, Subpart C for natural gas
CO2 GWP = global warming potential from 40 CFR 98, Subpart A
CH4 GWP = global warming potential from 40 CFR 98, Subpart A
N2O GWP = global warming potential from 40 CFR 98, Subpart A

W.2.18 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 3-5]

(a) **The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for the measurement of NOx emissions.**

(b) **All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 or any other applicable performance specifications, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.**

(c) **In the event that a continuous emission monitoring system fails to operate as required, a record shall be made of the times and reasons for the failure and efforts made to correct the problem.**

(d) **Whenever a NOx CEMS is down for more than twenty-four (24) hours, the Permittee shall monitor the catalyst bed inlet temperature used in conjunction with the COGEN with a continuous temperature monitoring system no less often than once per four (4) hours. When for any one reading, the catalyst bed inlet temperature is below the minimum temperature, the Permittee shall take a reasonable response. The minimum temperature for this catalyst bed inlet is 380 °F. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A temperature reading that is below the minimum temperature is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

(e) **Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 40 CFR 60, 40 CFR 75 and 40 CFR 96.**

W.2.19 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) **Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, in order to demonstrate compliance with Condition W.2.5(a), the Permittee shall conduct a performance test to verify the CO emission factor (CO EF_{COGEN} in Condition W.1.14(a)) for emissions unit COGEN using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.**

(b) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, and in order to demonstrate compliance with Condition W.2.5(b), the Permittee shall conduct a performance test to verify the VOC emission factor (VOC EF_{COGEN} in Condition W.1.14(b)) for emissions unit COGEN using methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(c) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, and in order to demonstrate compliance with Condition W.2.4(c), the Permittee shall perform thermal efficiency testing on COGEN utilizing methods as approved by the Commissioner. The test on the COGEN shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

W.2.20 Oxidation Catalyst Parametric Monitoring [40 CFR 64]

(a) In order to document proper operation, a continuous monitoring system shall be installed, calibrated, maintained, and operated on the inlet to the oxidation catalyst for measuring operating temperature. For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a 4-hour rolling average, calculated each hour using the hourly average temperatures from the 4 preceding hours. An hourly average temperature shall be calculated using all the temperature data recorded during the hour. From the date of the startup of the oxidation catalyst until the approved stack test results are available, the Permittee shall operate the oxidation catalyst at 525°F or above the 4-hour rolling average temperature recommended by the manufacturer.

(b) On and after the date the approved stack test results are available, the Permittee shall operate the oxidation catalyst at 525°F or above the 4-hour rolling average temperature specified by the catalyst manufacturer or as established during the most recent compliant stack test.

(c) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 4-hour rolling average temperature that is less than 525°F or as established in the most recent compliance stack test is not considered a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2- 7- 5(3)]

W.2.21 Record Keeping Requirement

(a) To document the compliance status with Condition W.2.18 - Maintenance of Continuous Emission Monitoring Equipment, the Permittee shall record the output of the continuous monitoring systems and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

(b) In the event that the NOx continuous emission monitoring system (CEMS) fails to

operate as required in Condition W.2.18 - Maintenance of Continuous Emission Monitoring Equipment, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(c) The Permittee shall maintain records of NOx emissions from COGEN as required by 40 CFR 60, Subpart KKKK requirements set forth in W.2.7 and W.2.11.

(d) To document the compliance status with Conditions W.2.4, W.2.6 and W.2.10, the Permittee shall maintain monthly records of the amount and type of fuel combusted in the COGEN.

(e) To document the compliance status with Condition W.2.4 - GHGs PSD BACT, the Permittee shall maintain monthly records of the CO2e emissions.

(f) To document the compliance status with Condition W.2.20 - Oxidation Catalyst Parametric Monitoring, the Permittee shall maintain continuous temperature records (on a 4-hour rolling average basis) for the oxidation catalyst.

(g) To document the compliance status with Condition W.2.10, the Permittee shall maintain monthly records of the fuel sulfur content of the natural gas combusted in the COGEN, including the associated duct burner. The Permittee may comply with this requirement by maintaining a record of the current, valid purchase contract, tariff sheet or transportation contract for the natural gas combusted in the COGEN, including the associated duct burner, specifying that the maximum total sulfur content for the natural gas is 20 grains of sulfur or less per 100 standard cubic feet.

(h) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

W.2.22 Reporting Requirements

(a) The Permittee shall submit a quarterly summary of the information to document the compliance status with 40 CFR 60, Subpart KKKK for:

(1) COGEN NOx limit;
(2) COGEN HRSG Duct Burner NOx limit; and
(3) COGEN SO2 limit.

The report submitted by the Permittee does require the certification by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) A quarterly summary of the information to document compliance status with Condition W.2.4(c) shall be submitted using the reporting forms located at the end of Section W of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

W.2.23 Reporting Requirements [326 IAC 14-2-1] [326 IAC 20-1]

Pursuant to 40 CFR 63.6095, "stay of standards for gas fired subcategories", COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

Section W consists of the following Sections: W.1 and W.2, and three (3) Part 70 Quarterly Reporting Forms.
Condition W.2.23 concludes the Section W requirements of this permit
Reporting forms immediately follow.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.1.5(a)
Facility: COGEN Project (COGEN, AUX BOILER, BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO)
COGEN Project, if W.1.19 is elected (COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO)
Parameter: CO
Limit: The total CO emissions from the COGEN Project, as described above, shall be limited to 360 tons CO per twelve (12) consecutive month period, with compliance determined on a monthly basis

YEAR: _____ **QUARTER:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position:_____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.1.5(b)
Facility: COGEN Project (COGEN, AUX BOILER, BW1-BOILER and BW2-BOILER (after each boiler ceases to burn coal and is converted to natural gas-fired only), SHEETFUMES TO)
COGEN Project, if W.1.19 is elected (COGEN, AUX BOILER, AUX2 BOILER, CG1 BOILER, and SHEETFUMES TO)

Parameter: VOC
Limit: The total VOC emissions from the COGEN Project, as described above, shall be limited to 39.6 tons VOC per twelve (12) consecutive month period, with compliance determined on a monthly basis

YEAR: _____ **QUARTER:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12- Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on: _____

Submitted by: _____
Title / Position:_____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620

Part 70 Permit No.: **T129-30384-00002; Condition W.2.21(b)**
Facility: **COGEN**
Parameter: **CO2e/GHG**
Limit: **Total emissions of GHGs from COGEN shall not exceed 937,379 tons of CO2e per 12 consecutive month period, with compliance determined on a monthly basis.**

YEAR: _____ **QUARTER:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this reporting period.**
☐ **Deviation/s occurred in this reporting period.**
Deviation has been reported on: _____

Submitted by: _____
Title / Position:_____
Signature:_____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: **SABIC Innovative Plastics Mt. Vernon, LLC**
Source Address: **1 Lexan Lane, Mt. Vernon, Indiana 47620**
Part 70 Permit No.: **T129-30384-00002; Condition W.1.4**
Facility: **AUX BOILER**
Parameter: **CO2e/GHG**
Limit: **Total emissions of GHGs from AUX BOILER shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler, with compliance determined on a monthly basis.**

YEAR: _____ **QUARTER:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total

Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this reporting period.**
☐ **Deviation/s occurred in this reporting period.**
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.1.4
Facility: AUX2 BOILER, if W.1.19 is elected
Parameter: CO2e/GHG
Limit: Total emissions of GHGs from AUX2 BOILER shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler, with compliance determined on a monthly basis.

YEAR: _____ QUARTER: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this reporting period.**

☐ **Deviation/s occurred in this reporting period.**
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Data Section

Part 70 Quarterly Report
(Submit Report Quarterly)

Source Name: SABIC Innovative Plastics Mt. Vernon, LLC
Source Address: 1 Lexan Lane, Mt. Vernon, Indiana 47620
Part 70 Permit No.: T129-30384-00002; Condition W.1.4
Facility: CG1 BOILER, if W.1.19 is elected
Parameter: CO2e/GHG
Limit: Total emissions of GHGs from CG1 BOILER shall not exceed 133,521 tons of CO2e per 12 consecutive month period per boiler, with compliance determined on a monthly basis.

YEAR: _____ **QUARTER:** _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12-Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this reporting period.**
☐ **Deviation/s occurred in this reporting period.**
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Other Changes

Upon further review IDEM, OAQ has made the following changes to the Title V permit T129-30384-00002. (deleted language appears as ~~strikout~~ and the new language **bolded**):

Change 1: The Reporting Requirements for the Responsibel Official citation has been updated throughout the permit from 326 IAC 2-7-1(34) to **326 IAC 2-7-1(35).**

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 129-33998-00002 and Significant Permit Modification No. 129-34002-00002. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Josiah Balogun at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5257 or toll free at 1-800-451-6027 extension 4-5257.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the **IDEM Permit Guide on the Internet at:** http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm

COGEN PTE Summary, No AOS (a)					
Pollutant	COGEN	AUX BOILER	BW1/2 Natural Gas-fired	SHEETFUMES TO	PTE for COGEN Project
	(tons/year)				
PM	56	10.9	16.1	0.323	83.3
PM10	56	10.9	16.1	0.323	83.3
PM2.5	56	10.9	16.1	0.323	83.3
VOC	20.1	2.18	11.6	5.66	39.6
NOx	786	155	296	2.13	1,239
SO2	5.13	0.66	1.27	0.026	7.1
CO	119	40.4	178	3.57	341
Pb	Non-detect	5.53E-04	1.06E-03	2.13E-05	1.63E-03
CO2e	937,379	133,521	255,635	5,113	1,331,649

a- *Project scope, No AOS*
Install: COGEN with CO CAT, AUX BOILER, and SHEETFUMES TO.
Convert: BW1-BOILER and BW2-BOILER to natural gas-fired only.
Permanently shut down: Boilerhouse I- BW BOILER, E BOILER, and L BOILER.
Note: R BOILER will not be altered as part of the COGEN project and will remain a control device for SHEETFUMES.

COGEN PTE Summary for AOS 1-COGEN Controlled with CO CAT and SCR (b)					
Pollutant	COGEN, AOS	AUX BOILER	BW1/2 Natural Gas-fired	SHEETFUMES TO	PTE for COGEN Project
	(tons/year)				
PM	99.5	10.9	16.1	0.323	127
PM10	99.5	10.9	16.1	0.323	127
PM2.5	99.5	10.9	16.1	0.323	127
VOC	20.1	2.18	11.6	5.66	39.6
NOx	57.5	154.9	296	2.13	511
SO2	5.13	0.66	1.27	0.026	7.1
CO	119	40.4	178	3.57	341
Pb	Non-detect	5.53E-04	1.06E-03	2.13E-05	1.63E-03
CO2e	937,379	133,521	255,635	5,113	1,331,649

b- *Project scope, AOS 1 COGEN Controlled with CO CAT and SCR*
Install: COGEN with CO CAT and SCR control, AUX BOILER, and SHEETFUMES TO.
Convert: BW1-BOILER and BW2-BOILER to natural gas-fired only.
Permanently shut down: Boilerhouse I- BW BOILER, E BOILER, and L BOILER.
Note: R BOILER will not be altered as part of the COGEN project and will remain a control device for SHEETFUMES.

COGEN PTE Summary AOS 2-Install CG1/AUX2 BOILER and Shut Down BW1/2-BOILERs (c)						
Pollutant	COGEN	AUX BOILER	CG1 BOILER	AUX2 BOILER	SHEETFUMES TO	PTE for COGEN Project
	(tons/year)					
PM	56	10.9	10.9	10.9	0.323	89.0
PM10	56	10.9	10.9	10.9	0.323	89.0
PM2.5	56	10.9	10.9	10.9	0.323	89.0
VOC	20.1	2.18	2.18	2.18	5.66	32.3
NOx	786	155	155	155	2.13	1,252
SO2	5.13	0.66	0.7	0.7	0.026	7.1
CO	119	40.4	40.4	40.4	3.57	244
Pb	Non-detect	5.53E-04	5.53E-04	5.53E-04	2.13E-05	1.68E-03
CO2e	937,379	133,521	133,521	133,521	5,113	1,343,057

c- *Project scope, AOS for CG1 BOILER and AUX2 BOILER*
Install: COGEN with CO CAT, AUX BOILER, CG1 BOILER, AUX2 BOILER, and SHEETFUMES TO.
Permanently shut down: Boilerhouse I- BW BOILER, E BOILER, and L BOILER. Boilerhouse II- BW1-BOILER and BW2-BOILER.
Note: R BOILER will not be altered as part of the COGEN project and will remain a control device for SHEETFUMES.

PTE Calculations for COGEN Emission Unit

The potential to emit was calculated pursuant to 326 IAC 2-2-1(ll).

PTE for COGEN Controlled with CO CAT (a)

Pollutant	Emission Factor Source (b)	Emission Factor	Potential to Emit	
		(lbs/MMBTU)	lbs/hr	tons/year
PM	1	0.0071	12.8	56.0
PM10	2	0.0071	12.8	56.0
PM2.5	2	0.0071	12.8	56.0
VOC	2	0.0025	4.59	20.1
NOx	3	0.099	179.4	786
SO2	4	6.47E-04	1.17	5.1
CO	3	0.0150	27.2	119.0
Pb	5	Non-detect	Not applicable	
CO2	6	117	212,004	928,578
CH4	7	8.60E-03	15.6	68.3
N2O	8	0.003	5.44	23.8
CO2e (c)	9	Not applicable	214,014	937,379

a- The heat input rating for this unit is:	1,812	MMBTU/hr	Source: SABIC's engineering consultants provided heat input information.

b- Emission Factor Source References:

1- PM assumed to be equal to PM10 and PM2.5

2- SABIC's engineering consultants use a proprietary modeling program to develop emission factors for the COGEN project.

3- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-1 Emission Factors for NOx and CO from Stationary Gas Turbines- NOx and CO for Lean-Premix

4- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors Criteria Pollutants and GHG from Stationary Gas Turbines- SO2 is 0.94S, where S equals percent sulfur in fuel.
SABIC based the COGEN SO2 PTE on a sulfur content of 0.2 gr/HSCF in natural gas. This sulfur content is provided in AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Footnote d.
0.2 gr S/HSCF = 0.000688% S
SO2 emission factor = 0.94 X 0.000688% S = 6.47E-04 lbs SO2/MMBTU

Conversion of 0.20 gr S/HSCF to percent S:
(0.2 gr S/HSCF) X (1 lb/7,000 gr) X (100 SCF/1 HSCF) X (24.07 SCF natural gas/1 lb natural gas) X (1/100) = 0.000688 % S in natural gas
Specific volume of natural gas =
(18.01 MW H2O/16 MW CH4) X (21.38, specific volume H2O at 20 deg C, 14.7 lb/cu. ft) = 24.07 SCF CH4/lb
Assume natural gas is 100% methane

Neither "pipeline quality natural gas" (0.5 gr sulfur/HSCF) nor "natural gas" (20 gr sulfur/HSCF) as defined in 40 CFR 72.2 cause the COGEN project to exceed the SO2 major modification threshold, 40 tpy SO2, pursuant to 326 IAC 2-2-1(ww)(1).

5- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Turbines- Lead listed lead emissions as non-detect for this type of emission unit.

6- 40 CFR Part 98 Subpart C Table C-1- CO2 for Natural Gas

7- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors for Criteria Pollutants and Greenhouse Gas from Stationary Gas Turbines- Methane (CH4) for Natural Gas-Fired Turbines

8- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Turbines- N2O for Natural Gas-Fired Turbines

9- CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.

c- GWP for CO2, CH4, and N2O

	GWP (d)
CO2	1
CH4	25
N2O	298

d- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

COGEN PTE Example Calculations:

PM (lbs/hr) =	0.00706	lbs/MMBTU	X	1,812	MMBTU/hr =	12.8	lbs PM/hr
PM (tons/yr) =	12.8	lbs PM/hr	X	(8760 hrs/yr)	X (1/2000 lbs/ton) =	56.0	tons PM/yr
PTE for all other pollutants was calculated using the same methodology except for CO2e, which is shown separately.							
CO2e (lbs/hr) =	212,004	lbs CO2/hr	X	1 GWP	+		
	15.6	lbs CH4/hr	X	25 GWP	+		
	5.44	lbs N2O/hr	X	298 GWP	=	214,014	lbs CO2e/hr

Note: The annual PTE for CO2e is calculated using the same methodology as all other pollutants.

PTE Calculations for Alternate Operating Scenario (AOS) 1- COGEN Controlled with CO CAT and SCR

The potential to emit was calculated pursuant to 326 IAC 2-2-1(ll).

PTE for AOS 1 (COGEN Controlled with CO CAT and SCR) (a)

Pollutant	Factor Source (b)	Emission Facto	Potential to Emit	
		(lbs/MMBTU)	lbs/hr	tons/year
PM	1	0.0125	22.7	99.5
PM10	2	0.0125	22.7	99.5
PM2.5	2	0.0125	22.7	99.5
VOC	2	0.0025	4.59	20.1
NOx	2	0.0072	13.1	57.5
SO2	3	6.47E-04	1.17	5.1
CO	4	0.0150	27.2	119.0
Pb	5	Non-detect	Not applicable	
CO2	6	117	212,004	928,578
CH4	7	8.60E-03	15.6	68.3
N2O	8	0.003	5.44	23.8
CO2e (c)	9	Not applicable	214,014	937,379

a- The heat input rating for this unit	1,812	MMBTU/hr	Source: SABIC's engineering consultants provided heat input information.

b- Emission Factor Source References:

1- PM assumed to be equal to PM10 and PM2.5

2- SABIC's engineering consultants used a proprietary modeling program to develop emission factors for the COGEN project.

3- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors Criteria Pollutants and GHG from Stationary Gas Turbines- SO2 is 0.94S, where S equals percent sulfur in fuel.
SABIC based the COGEN SO2 PTE on a sulfur content of 0.2 gr/HSCF in natural gas. This sulfur content is provided in AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Footnote d.
0.02 gr S/HSCF = 0.000688% S
SO2 emission factor = 0.94 X 0.000688% S = 6.47E-04 lbs SO2/MMBTU

Conversion of 0.20 gr S/HSCF to percent S:
(0.2 gr S/HSCF) X (1 lb/7,000 gr) X (100 SCF/1 HSCF) X (24.07 SCF natural gas/1 lb natural gas) X (1/100) = 0.000688 % S in natural gas
Specific volume of natural gas =
(18.01 MW H2O/16 MW CH4) X (21.38, specific volume H2O at 20 deg C, 14.7 lb/cu. ft) = 24.07 SCF CH4/lb
Assume natural gas is 100% methane

Neither "pipeline quality natural gas" (0.5 gr sulfur/HSCF) nor "natural gas" (20 gr sulfur/HSCF) as defined in 40 CFR 72.2 cause the COGEN project to exceed the SO2 major modification threshold, 40 tpy SO2, pursuant to 326 IAC 2-2-1(ww)(1).

4- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-1 Emission Factors for NOx and CO from Stationary Gas Turbines- CO for Lean-Premix

5- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors for Criteria Pollutants and Greenhouse Gases from Stationary Gas Turbines- Lead listed lead emissions as non-detect for this type of emission unit.

6- 40 CFR Part 98 Subpart C Table C-1- CO2 for Natural Gas

7- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors for Criteria Pollutants and Greenhouse Gas from Stationary Gas Turbines- Methane (CH4) for Natural Gas-Fired Turbines

8- AP-42 Chapter 3.1 Stationary Gas Turbines Table 3.1-2a Emission Factors for Criteria Pollutants and Greenhouse Gas from Stationary Gas Turbines- N2O for Natural Gas-Fired Turbines

9- CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.

c- GWP for CO2, CH4, and N2O

	GWP (d)
CO2	1
CH4	25
N2O	298

d- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

Note: The calculations for Alternate Operating Scenario followed the same methodology as those for COGEN controlled with CO CAT.

PTE Calculations for BW1 and BW2 BOILER Conversion to Natural Gas-Fired

The potential to emit was calculated pursuant to 326 IAC 2-2-1(ll).

PTE for 01-001 BW1-BOILER and 01-001 BW2-BOILER Conversion to Natural Gas-Fired (a)

Pollutant	Emission Factor Source (b)	Emission Factor	Potential to Emit- BW1 BOILER		Potential to Emit- BW2 BOILER	
		(lbs/MMSCF)	lbs/hr	tons/year	lbs/hr	tons/year
PM	1	7.6	1.84	8.05	1.84	8.05
PM10	1	7.6	1.84	8.05	1.84	8.05
PM2.5	1	7.6	1.84	8.05	1.84	8.05
VOC	2	5.5	1.33	5.82	1.33	5.82
NOx	3	140	33.8	148	33.8	148
SO2	4	0.60	0.145	0.635	0.145	0.635
CO	5	84	20.3	88.9	20.3	88.9
Pb	6	5.00E-04	1.21E-04	5.29E-04	1.21E-04	5.29E-04
CO2	7	120,000	29,010	127,063	29,010	127,063
CH4	8	2.30	0.556	2.44	0.556	2.44
N2O	9	2.20	0.532	2.33	0.532	2.33
CO2e (c)	10	Not applicable	29,182	127,818	29,182	127,818

a- The heat input rating for these units are:

BW1-BOILER	BW2-BOILER	Units	
249	249	MMBTU/hr	Source: AA T129-33362-00002 Section D.3

Conversion from MMSCF to MMBTU	1,030	MMBTU/ MMSCF conversion historically used by SABIC for natural gas supplied

b- Emission Factor Source References:

1- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion- PM(Total)
All PM is assumed to be less than 1.0 micrometer in diameter; therefore, PM = PM10 = PM2.5.

2- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- VOC

3- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- NOx for Large Wall-Fired Boilers Controlled-Low NOx burners

4 AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- SO2
SABIC bases BW1-BOILER and BW2-BOILER SO2 PTE on a sulfur content of 0.2 gr/HSCF in natural gas. This sulfur content is provided in AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Footnote d.

Neither "pipeline quality natural gas" (0.5 gr sulfur/HSCF) nor "natural gas" (20 gr sulfur/HSCF) as defined in 40 CFR 72.2 cause the COGEN project to exceed the SO2 major modification threshold, 40 tpy SO2, pursuant to 326 IAC 2-2-1(ww)(1).

5- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- CO for Large Wall-Fired Boilers (>100), Pre-NSPS

6- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Lead

7- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- CO2

8- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Methane (CH4)

9- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- N2O (Uncontrolled)

10- CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.

c- GWP for CO2, CH4, and N2O

	GWP (d)
CO2	1
CH4	25
N2O	298

d- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

BW1 Conversion to Natural Gas PTE Example Calculations:

Note: BW2 PTE was calculated using the same methodology as BW1.

PM (lbs/hr) =	7.6	lb PM/ MMSCF X	249	MMBTU/hr X	(1/ 1,030 MMBTU/ MMSCF) =	1.84	lbs PM/hr
PM (tons/yr) =	1.84	lbs PM/ hr X	(8760 hrs/yr)	(1/2000 lbs/ton) =		88.9	tons PM/yr

PTE for all other pollutants was calculated using the same methodology except for CO2e, which is shown separately.

CO2e (lbs/hr) =	127,063	lbs CO2/hr	X	1 GWP	+		
	2.4	lbs CH4/hr	X	25 GWP	+		
	2.3	lbs N2O/hr	X	298 GWP	=	127,818	lbs CO2e/hr

Note: The annual PTE for CO2e is calculated using the same methodology as all other pollutants.

PTE Calculations for AUX BOILER

The potential to emit was calculated pursuant to 326 IAC 2-2-1(ll).

PTE for AUX BOILER (a)

Pollutant	Emission Factor Source (b)	Emission Factor		Potential to Emit	
				lbs/hr	tons/year
PM	1	0.010	lbs/MMBTU	2.49	10.9
PM10	2	0.010	lbs/MMBTU	2.49	10.9
PM2.5	2	0.010	lbs/MMBTU	2.49	10.9
VOC	2	0.002	lbs/MMBTU	0.498	2.18
NOx	3	140	lbs/MMSCF	35.4	154.85
SO2	4	0.60	lbs/MMSCF	0.152	0.66
CO	2	0.037	lbs/MMBTU	9.21	40.4
Pb	5	5.00E-04	lbs/MMSCF	1.26E-04	5.53E-04
CO2	6	120,000	lbs/MMSCF	30,304	132,733
CH4	7	2.3	lbs/MMSCF	0.581	2.54
N2O	8	2.2	lbs/MMSCF	0.556	2.43
CO2e (c)	9	Not applicable		30,484	133,521

a- The heat input rating for this unit is	249	MMBTU/hr	Source: SABIC's engineering consultants provided heat input information.
	Conversion from MMSCF to MMBTU	986	MMBTU/ MMSCF heat content provided by future natural gas vendor.

b- Emission Factor Source References:

1- PM assumed to be equal to PM10 and PM2.5

2- SABIC's engineering consultants provided vendor specific emission factors to develop emission factors for the COGEN project.

(NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- NOx for Large Wall-Fired Boilers Controlled-Low NOx burners

4 AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- SO2
SABIC bases the AUX BOILER SO2 PTE on a sulfur content of 0.2 gr/HSCF in natural gas. This sulfur content is provided in AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Footnote d.

Neither "pipeline quality natural gas" (0.5 gr sulfur/HSCF) nor "natural gas" (20 gr sulfur/HSCF) as defined in 40 CFR 72.2 cause the COGEN project to exceed the SO2 major modification threshold, 40 tpy SO2, pursuant to 326 IAC 2-2-1(ww)(1).

5- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Lead

6- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- CO2

7- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Methane (CH4)

8- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- N2O (Uncontrolled)

9- CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.

c- GWP for CO2, CH4, and N2O

	GWP (d)
CO2	1
CH4	25
N2O	298

d- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

AUX BOILER PTE Example Calculations (with MMBTU/hr emission factor)

Pb (lbs/hr) =	0.01	lb PM/ MMBTU	X	249	MMBTU/hr X	2.49	lbs PM/hr
PM (tons/yr) =	2.49	lbs PM/ hr	X	(8760 hrs/yr)	(1/2000 lbs/ton) =	10.9	tons PM/yr

AUX BOILER PTE Example Calculations (with MMSCF/hr emission factors)

Pb (lbs/hr) =	5.00E-04	lb PM/ MMSCF	X	249	MMBTU/hr X	(1/ 986 MMBTU/ MMSCF) =	1.26E-04	lbs Pb/hr
Pb (tons/yr)=	1.26E-04	lbs Pb/hr	X	(8760 hrs/yr)	(1/2000 lbs/ton) =		5.53E-04	tons PM/yr

PTE for all other pollutants was calculated using the same methodology except for CO2e, which is shown separately.

CO2e (lbs/hr) =	132,733	lbs CO2/hr	X	1 GWP	+		
	3	lbs CH4/hr	X	25 GWP	+		
	2	lbs N2O/hr	X	298 GWP	=	30,484	lbs CO2e/hr

Note: The annual PTE for CO2e is calculated using the same methodology as all other pollutants.

PTE Calculations for AOS 2- Install CG1 BOILER and AUX2 BOILER, Shut Down BW1-BOILER and BW2-BOILER

The potential to emit was calculated pursuant to 326 IAC 2-2-1(ll).

PTE for CG1 BOILER and AUX2 BOILER (a)

Pollutant	Emission Factor Source (b)	Emission Factor		Potential to Emit CG1 BOILER		Potential to Emit AUX2 BOILER	
				lbs/hr	tons/year	lbs/hr	tons/year
PM	1	0.010	lbs/MMBTU	2.49	10.9	2.49	10.9
PM10	2	0.010	lbs/MMBTU	2.49	10.9	2.49	10.9
PM2.5	2	0.010	lbs/MMBTU	2.49	10.9	2.49	10.9
VOC	2	0.002	lbs/MMBTU	0.498	2.18	0.498	2.18
NOx	3	140	lbs/MMSCF	35.4	155	35.4	155
SO2	4	0.600	lbs/MMSCF	0.15	0.66	0.15	0.66
CO	2	0.037	lbs/MMBTU	9.21	40.4	9.21	40.4
Pb	5	5.00E-04	lbs/MMSCF	1.26E-04	5.53E-04	1.26E-04	5.53E-04
CO2	6	120,000	lbs/MMSCF	30,304	132,733	30,304	132,733
CH4	7	2.3	lbs/MMSCF	0.581	2.54	0.581	2.54
N2O	8	2.2	lbs/MMSCF	0.556	2.43	0.556	2.43
CO2e (c)	9	Not applicable		30,484	133,521	30,484	133,521

a- The heat input rating for CG1 BOILER and AUX2 BOILER:	249	MMBTU/hr	Source: SABIC's engineering consultants provided heat input information.
	Conversion from MMSCF to MMBTU	986	MMBTU/ MMSCF heat content provided by future natural gas vendor.

b- Emission Factor Source References:

1- PM assumed to be equal to PM10 and PM2.5

2- SABIC's engineering consultants provided vendor specific emission factors to develop emission factors for the COGEN project.

3- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- NOx for Large Wall-Fired Boilers Controlled-Low NOx burners

4 AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- SO2
SABIC bases the CG1 BOILER and AUX2 BOILER SO2 PTE on a sulfur content of 0.2 gr/HSCF in natural gas. This sulfur content is provided in AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Footnote d.
Neither "pipeline quality natural gas" (0.5 gr sulfur/HSCF) nor "natural gas" (20 gr sulfur/HSCF) as defined in 40 CFR 72.2 cause the COGEN project to exceed the SO2 major modification threshold, 40 tpy SO2, pursuant to 326 IAC 2-2-1(ww)(1).

5- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Lead

6- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- CO2

7- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Methane (CH4)

8- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- N2O (Uncontrolled)

9- CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.

c- GWP for CO2, CH4, and N2O

	GWP (d)
CO2	1
CH4	25
N2O	298

d- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

CG1 BOILER and AUX2 BOILER PTE Example Calculations (with MMBTU/hr emission factor)

PM (lbs/hr) =	0.01	lb PM/ MMBTU	X	249	MMBTU/hr X		2.49	lbs PM/hr
PM (tons/yr) =	2.49	lbs PM/ hr	X	(8760 hrs/yr)	(1/2000 lbs/ton)	=	10.9	tons PM/yr

CG1 BOILER and AUX2 BOILER PTE Example Calculations (with MMSCF/hr emission factors)

Pb (lbs/hr) =	5.00E-04	lb PM/ MMSCF	X	249	MMBTU/hr X	(1/ 986 MMBTU/ MMSCF) =	1.26E-04	lbs Pb/hr
Pb (tons/yr)=	1.26E-04	lbs Pb/hr	X	(8760 hrs/yr)	(1/2000 lbs/ton)	=	5.53E-04	tons PM/yr

PTE for all other pollutants was calculated using the same methodology except for CO2e, which is shown separately.

CO2e (lbs/hr) =	132,733	lbs CO2/hr	X	1 GWP	+		
	3	lbs CH4/hr	X	25 GWP	+		
	2	lbs N2O/hr	X	298 GWP	=	30,484	lbs CO2e/hr

Note: The annual PTE for CO2e is calculated using the same methodology as all other pollutants.

326 IAC 2-2-2(d)(5) allows the SHEETFUMES emissions to be calculated using the actual-to-projected-actual applicability test pursuant to 326 IAC 2-2-2(d)(3).
To use the applicability test the sum of the difference between the projected actual emissions (defined in 326 IAC 2-2-1(pp) and the baseline actual emissions must be calculated.

To calculate the projected actual emissions for SHEETFUMES, pursuant to 326 IAC 2-2-1(pp)-

Calculate the maximum annual rate, in tpy, at which SHEETFUMES is projected to emit VOC.

326 IAC 2-2-1(pp)(2)(B) allows in lieu of the method in 326 IAC 2-2-1(pp)(2)(A), for SABIC to elect to use SHEETFUMES potential to emit, in tons per year, as defined in 326 IAC 2-2-1(ll).

326 IAC 2-2-1(ll) defined potential to emit as the maximum capacity of a stationary source to emit a pollutant (VOC) under its physical and operational design.

SABIC did perform the actual-to-projected-actual applicability test using the method to calculate projected actual emissions in 326 IAC 2-2-1(pp)(2)(A). The emissions that could have been accommodated by SHEETFUMES during the baseline actual period, 2005-2006, resulted in the projected actuals for SHEETFUMES being a negative number. SABIC is presenting the calculations below based on PTE because the calculations are less complex.

Calculating SHEETFUMES Projected Actual Emissions/ PTE

SHEETFUMES Coating Lines	VOC Input (tons/year)	oxidizer control	VOC (tons/year)
C-41 (a)	490	99%	4.90
C-42 (a)			
S-4 (b)	26.5		0.26
S-5 (b)	26.5		0.26
		Total	**5.43**

a- C-41 and C-42 have a combined VOC input limit in AA 129-33362-00002 Condition L.2.1(a) of 490 tons VOC per 12 consecutive month period.
b- S-4 and S-5 VOC input is calculated:

Maximum daily coating usage	50	gal/day-coating line
Maximum VOC content, AA 129-33362-00002 Condition L.2.4	2.9	lbs VOC/gal excluding water
Water content of coating	0%	Assumed zero water content

Annual maximum VOC input = 50 gal/day-coating line X 2.9 lbs VOC/gal excluding water X 365 days/year X (1 ton/2000 lbs)

c- The coating application enclosures are monitored for permanent total enclosure pursuant to AA 129-33362-00002 Condition L.2.12 (C-41),

Heat Input for SHEETFUMES Thermal Oxidizer (SHEETFUMES TO)

Maximum heat input (natural gas only)	10	MMBTU/hr
Conversion from MMSCF to MMBTU	1,030	MMBTU/ MMSCF conversion historically used by SABIC for future natural gas

Emission Factors from AP-42 Chapter 1.4 Natural Gas Combustion

Pollutant	AP-42 Table	Emission Factor (lbs/MMSCF)
NOx	Table 1.4-1: NOx for Small Boilers- Controlled Low NOx Burners	50
CO	Table 1.4-1: CO for Small Boilers	84
Lead (Pb)	Table 1.4-2: Pb	0.0005
PM	Table 1.4-2: PM	7.6
PM10	Table 1.4-2: PM10	7.6
PM2.5	Table 1.4-2: PM2.5	7.6
SO2	Table 1.4-2: SO2 (d)	0.6
VOC	Table 1.4-2: VOC	5.5
CO2	Table 1.4-2: CO2	120,000
Methane (CH4)	Table 1.4-2: CH4	2.3
N2O	Table 1.4-2: N2O for	0.64
CO2e (e)	40 CFR Part 98, Part A-Table A-1	120,248

natural gas. This sulfur content is provided in AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Footnote

e- The CO2e is calculated using the global warming potential (GWP) of CO2, CH4, and N2O.

CO2	1
CH4	25
N2O	298

PTE Summary from Combustion from SHEETFUMES TO

Pollutant	PTE (lbs/hr)	PTE (tons/yr)
NOx	0.49	2.13
CO	0.82	3.57
Lead (Pb)	0.00	2.13E-05
PM	0.07	0.32
PM10	0.07	0.32
PM2.5	0.07	0.32
SO2	0.01	0.03
VOC	0.05	0.23
CO2	1165.05	5,103
Methane (CH4)	0.02	0
N2O	0.01	0
CO2e	1167.46	5,113

Total PTE Summary for SHEETFUMES TO

Pollutant	PTE (lbs/hr)	PTE (tons/yr)
NOx	0.49	2.13
CO	0.82	3.57
Lead (Pb)	0.00	0.00
PM	0.07	0.32
PM10	0.07	0.32
PM2.5	0.07	0.32
SO2	0.01	0.03
VOC	1.17	5.66
CO2	1,165	5,103
Methane (CH4)	0.02	0.10
N2O	0.01	0.03
CO2e	1,167	5,113

Baseline Actual Emission Calculations for 09-001 BW-BOILER

The baseline actual emissions were calculated pursuant to 326 IAC 2-2-1(e).

Emission Factors for 09-001 BW-BOILER

Pollutant	Units	Emission Factor Source (a)	2005	2006
PM	lbs PM/MMSCF natural gas burned	1	7.6	7.6
PM10	lbs PM10/ MMSCF natural gas burned	1	7.6	7.6
PM2.5	lbs PM2.5/ MMSCF natural gas burned	1	7.6	7.6
VOC	lbs VOC/ MMSCF natural gas burned	2	5.5	5.5
NOx	lbs NOx/ MMSCF natural gas burned	3	280	280
SO2	lbs SO2/ MMSCF natural gas burned	4	0.6	0.6
CO	lbs CO/ MMSCF natural gas burned	5	84	84
Lead (Pb)	lbs Pb/MMSCF natural gas burned	6	5.00E-04	5.00E-04
CO2	lbs CO2/ MMSCF natural gas burned	7	120,000	120,000
CH4	lbs CH4/ MMSCF natural gas burned	8	2.3	2.3
N2O	lbs N2O/MMSCF natural gas burned	9	2.2	2.2
CO2e (b)	CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.			

a- Emission Factor Source References

1- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion- PM(Total)
All PM is assumed to be less than 1.0 micrometer in diameter; therefore, PM = PM10 = PM2.5.

2- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas

3- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- NOx for Large Wall-Fired Boilers (>100), Pre-NSPS

4- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas

5- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- CO for Large Wall-Fired Boilers (>100), Pre-NSPS

6- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas

7- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas

8- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Methane (CH4)

9- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- N2O (Uncontrolled)

b- GWP for CO2, CH4, and N2O

	GWP (c)
CO2	1
CH4	25
N2O	298

c- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

Fuel Usage for 09-001 BW-BOILER from 2005 to 2006 (d)

Fuel	Units	2005	2006
Natural Gas	MMSCF	301	191

d- Fuel usage data was taken from annual air emission summaries.

Baseline Actual Emissions Summary for 09-001 BW-BOILER from 2005 to 2006 (e)

Year	2005	2006
Pollutant	**(tons/year)**	
PM	1.14	0.73
PM10	1.14	0.73
PM2.5	1.14	0.73
VOC	0.83	0.53
NOx	42.1	26.7
SO2	0.09	0.06
CO	12.64	8.02
Lead	7.53E-05	4.78E-05
CO2	18,060	11,460
CH4	0.35	0.22
N2O	0.33	0.21
CO2e	18,167	11,528

e- Following are example calculations for 2005. All other years were calculated following the same methodology.

PM (tons/year) =	7.6	natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	1.14	tons PM
PM10 (tons/year) =	7.6	MMSCF natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	1.14	tons PM10
PM2.5 (ton/year) =	7.6	MMSCF natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	1.14	tons PM2.5
VOC (tons/year) =	5.5	MMSCF natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	0.83	tons VOC
NOx (tons/year) = from natural gas	280	MMSCF natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	42.14	tons NOx
SO2 (tons/year) =	0.60	MMSCF natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	0.09	tons SO2
CO (tons/year) =	84.0	natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	12.64	tons CO
Pb (tons/year) =	5.00E-04	natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	7.53E-05	tons Pb
CO2 (tons/year) =	120,000	MMSCF natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	18,060	tons CO2
CH4 (tons/year) =	2.3	MMSCF natural gas burned	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	0.35	tons CH4
N2O (tons/year) =	2.2	N2O/MMSCF natural gas	X	301	MMSCF	X	(1/ 2000 lbs/ton)	=	0.33	tons N2O
CO2e (tons/year) =	(	18,060	tons CO2	X	1	GWP	)	+	18,060	
	(	0.35	tons CH4	X	25	GWP	)	+	9	
	(	0.33	tons N2O	X	298	GWP	)	+	99	
								Total =	18,167	tons CO2e

Baseline Actual Emission Calculations for 09-002 E BOILER

The baseline actual emissions were calculated pursuant to 326 IAC 2-2-1(e).

Emission Factors for 09-002 E BOILER from 2005 to 2006

Pollutant	Units	Emission Factor Source (a)	2005	2006
PM	lbs PM/ton coal burned	1, 2	9.37	9.37
PM10	lbs PM10/ton coal burned	1, 2	6.00	6.00
PM2.5	lbs PM2.5/ton coal burned	1, 2	3.17	3.17
VOC	lbs VOC/ton coal burned	3	0.05	0.05
NOx	lbs NOx/ton coal burned	4	7.50	7.50
SO2	lbs SO2/ton coal burned	5	80.56	80.94
CO	lbs CO/ton coal burned	6	5.00	5.00
Lead (Pb)	lbs Pb/ton coal burned	7	5.83E-06	5.83E-06
CO2	lb CO2 / ton coal burned	8	5,454	5,454
CH4	lbs CH4/ ton coal burned	9	0.06	0.06
N2O	lbs N2O/ ton coal burned	10	0.04	0.04
CO2e (b)	CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.			

a- Emission Factor Source References

1- Stack test results from Boilerhouse I stack test conducted on April 6-8, 2005. The testing was conducted on the combined stack for Erie and Lasker boilers.
Only filterable PM was analyzed during stack test; therefore, AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-9 Cumulative Particle Size Distribution and Size-Specific Emission Factors for Spreader Stokers Burning Bituminous Coal- Cumulative Emission Factor (lb/ton)-Baghouse was used to develop a ratio for PM10/PM and PM2.5/PM.
Ratio of PM10/PM= 0.072/0.12= 0.60
Ratio of PM2.5/PM= 0.032/0.12= 0.267
Condensable PM was added to the stack test results. See source reference 2.

2- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-5 Condensable Particulate Matter Emission Factors for Bituminous and Subbituminous Coal Combustion- CPM-TOT for Spreader stoker, travelling grate, overfeed stoker, underfeed stoker
Using a heat content of 11,500 BTU/lb. of coal.

3- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH2, TNMOC, and H2O from Bituminous and Subbituminous Coal Combustion- TNMOC for Spreader stoker, with multiple cyclones, no reinjection

4- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- NOx for Overfeed stoker

5- Sulfur content of coal used in Erie boiler:

	2005	2006
Sulfur Content	2.12%	2.13%

Using AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- SOx for Overfeed stoker (38 X sulfur content) the emission factors were calculated.

6- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- CO for Overfeed stoker

7- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-17 Emission Factors for Trace Elements, POM, and HCOH from Uncontrolled Bituminous and Subbituminous Coal Combustion- Lead for Spreader Stoker

8- SABIC sampled coal being feed into the Erie boiler on 4/6/2005. An ultimate analysis was performed to analysis the carbon content of coal on a dry basis (value reported by testing laboratory, 75.12%). The carbon content is multiplied by the conversion factor in AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-20 Default CO2 Emission Factors for U.S. Coals- Footnote a (72.6) to calculate a coal-specific CO2 emission factor.

9- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- CH4 for Spreader stoker, with multiple cyclones, no reinjection

10- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- N2O for Spreader stoker, with multiple cyclones, no reinjection

b- GWP for CO2, CH4, and N2O

	GWP (c)
CO2	1
CH4	25
N2O	298

c- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

Fuel Usage for 09-002 E BOILER from 2005 to 2006(d)

Fuel Usage	Units	2005	2006
Coal	Tons	66,308	61,348

d- Fuel usage data was taken from annual air emission summaries.

Baseline Actual Emissions Summary from 09-002 E BOILER for 2005 to 2006 (e)

Pollutant	2005	2006
	(tons/year)	
PM	310.81	287.56
PM10	199.02	184.14
PM2.5	105.23	97.36
VOC	1.66	1.53
NOx	249	230
SO2	2,671	2,483
CO	165.77	153.37
Pb	1.93E-04	1.79E-04
CO2	180,812	167,287
CH4	1.99	1.84
N2O	1.33	1.23
CO2e	181,257	167,699

e- Following are example calculations for 2005. All other years were calculated following the same methodology.

PM (tons/year) =	9.37	lbs PM/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	310.81	tons PM
PM10 (tons/year)	6.00	lbs PM10/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	199.02	tons PM10
PM2.5 (ton/year) =	3.17	lbs PM2.5/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	105.23	tons PM2.5
VOC (tons/year) =	0.05	lbs VOC/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	1.66	tons VOC
NOx (tons/year)=	7.50	lbs NOx/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	249	tons NOx
SO2 (tons/year) =	80.56	lbs SO2/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	2,671	tons SO2
CO (tons/year) =	5.00	lbs CO/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	166	tons CO
Pb (tons/year) =	5.83E-06	lbs Pb/ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	1.93E-04	tons Pb
CO2 (tons/year) =	5,454	lb CO2 / ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	######	tons CO2
CH4 (tons/year) =	0.06	lbs CH4/ ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	1.99	tons CH4
N2O (tons/year) =	0.04	lbs N2O/ ton coal burned	X	66,308	tons coal burned	X	(1/ 2000 lbs/ton)	=	1.33	tons N2O
CO2e (tons/year)	(	180,812	tons CO2	X	1	GWP	)	=	######	
	(	1.99	tons CH4	X	25	GWP	)	=	50	
	(	1.33	tons N2O	X	298	GWP	)	=	395	
								Total =	######	tons CO2e

Baseline Actual Emission Calculations for 09-002 L BOILER

The baseline actual emissions were calculated pursuant to 326 IAC 2-2-1(e).

Emission Factors for 09-002 L BOILER from 2005 to 2006

Pollutant	Units	Emission Factor Source (a)	2005	2006
PM	lbs PM/ton coal burned	1, 2	9.37	9.37
PM10	lbs PM10/ton coal burned	1, 2	6.00	6.00
PM2.5	lbs PM2.5/ton coal burned	1, 2	3.17	3.17
VOC	lbs VOC/ton coal burned	3	0.05	0.05
NOx	lbs NOx/ton coal burned	4	7.50	7.50
SO2	lbs SO2/ton coal burned	5	80.56	80.94
CO	lbs CO/ton coal burned	6	5.00	5.00
Lead (Pb)	lbs Pb/ton coal burned	7	5.83E-06	5.83E-06
CO2	lb CO2 / ton coal	8	5,385	5,385
CH4	lbs CH4/ ton coal burned	9	0.04	0.04
N2O	lbs N2O/ ton coal burned	10	0.03	0.03
CO2e (b)	CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.			

a- Emission Factor Source References

1- Stack test results from Boilerhouse I stack test conducted on April 6-8, 2005. The testing was conducted on the combined stack for Erie and Lasker boilers.
Only filterable PM was analyzed during stack test; therefore, AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-9 Cumulative Particle Size Distribution and Size-Specific Emission Factors for Spreader Stokers Burning Bituminous Coal- Cumulative Emission Factor (lb/ton)-Baghouse was used to develop a ratio for PM10/PM and PM2.5/PM.
Ratio of PM10/PM= 0.072/0.12= 0.60
Ratio of PM2.5/PM= 0.032/0.12= 0.267
Condensable PM was added to the stack test results. See source reference 3.

2- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-5 Condensable Particulate Matter Emission Factors for Bituminous and Subbituminous Coal Combustion- CPM-TOT for Spreader Stoker, travelling grate, overfeed stoker, underfeed stoker.
Using a heat content of 11,500 BTU/lb of coal.

3- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH2, TNMOC, and H2O from Bituminous and Subbituminous Coal Combustion- TNMOC for Spreader Stoker, with multiple cyclones, and reinjection

4- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- NOx for Overfeed stoker

5- Sulfur content of coal used in Erie boiler:

	2005	2006
Sulfur Content	2.12%	2.13%

Using AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- SOx for Overfeed stoker (38 X sulfur content) the emission factors were calculated.

6- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- CO for Spreader Overfeed stoker

7- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-17 Emission Factors for Trace Elements, POM, and HCOH from Uncontrolled Bituminous and Subbituminous Coal Combustion- Lead for Spreader Stoker

8- SABIC sampled coal being fed into the Lasker boiler on 4/6/2005. An ultimate analysis was performed to analyze the carbon content of coal on a dry basis (value reported by testing laboratory, 74.17%). The carbon content is multiplied by the conversion factor in AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-20 Default CO2 Emission Factors for U.S. Coals- Footnote a (72.6) to calculate a coal-specific CO2 emission factor.

9- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- CH4 for Spreader stoker, with multiple cyclones, no reinjection

10- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- N2O for Spreader stoker, with multiple cyclones, no reinjection

b- GWP for CO2, CH4, and N2O

	GWP (c)
CO2	1
CH4	25
N2O	298

c- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

Fuel Usage for 09-002 L BOILER from 2005 to 2006 (d)

Fuel Usage	Units	2005	2006
Coal	Tons	25,176	23,900

d- Fuel usage data was taken from annual air emission summaries.

Baseline Actual Emissions Summary from 09-002 L BOILER 2005 to 2006 (e)

Pollutant	2005	2006
	(tons/year)	
PM	118.01	112.03
PM10	75.57	71.74
PM2.5	39.95	37.93
VOC	0.63	0.60
NOx	94	90
SO2	1,014	967
CO	62.94	59.75
Pb	7.34E-05	6.97E-05
CO2	67,783	64,349
CH4	0.50	0.48
N2O	0.38	0.36
CO2e	67,908	64,468

e- Following are example calculations for 2005. All other years were calculated following the same methodology.

PM (tons/year) =	9.37	lbs PM/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	118	tons PM
PM10 (tons/year) =	6.00	PM10/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	75.57	tons PM10
PM2.5 (ton/year) =	3.17	PM2.5/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	39.95	tons PM2.5
VOC (tons/year) =	0.05	lbs VOC/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	0.63	tons VOC
NOx (tons/year)=	7.50	lbs NOx/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	94	tons NOx
SO2 (tons/year) =	80.56	lbs SO2/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	1,014	tons SO2
CO (tons/year) =	5.00	lbs CO/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	62.94	tons CO
Pb (tons/year) =	5.83E-06	lbs Pb/ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	7.34E-05	tons Pb
CO2 (tons/year) =	5,385	lb CO2 / ton coal	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	67,783	tons CO2
CH4 (tons/year) =	0.04	lbs CH4/ ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	0.50	tons CH4
N2O (tons/year) =	0.03	lbs N2O/ ton coal burned	X	25,176	tons coal burned	X	(1/ 2000 lbs/ton)	=	0.38	tons N2O
CO2e (tons/year) =	(	67,783	tons CO2	X	1	GWP	)	=	67,783	
	(	0.50	tons CH4	X	25	GWP	)	=	13	
	(	0.38	tons N2O	X	298	GWP	)	=	113	
								Total =	67,908	tons CO2e

Baseline Actual Emission Calculations for 01-001 BW1-BOILER

The baseline actual emissions were calculated pursuant to 326 IAC 2-2-1(e).

Emission Factor for 01-001 BW1-BOILER from 2005 to 2006

Fuel Burned	Pollutant	Units	Emission Factor Source (a)	2005	2006
Coal	PM	lbs PM/ton coal burned	1, 2	1.32	1.52
	PM10	lbs PM10/ton coal burned	1, 2	1.32	1.52
	PM2.5	lbs PM2.5/ton coal burned	1, 2	1.27	1.47
	VOC	lbs VOC/ton coal burned	3	0.06	0.06
	NOx	burned	4	22.00	22.00
	SO2	burned	5	32.30	35.72
	CO	burned	6	0.50	0.50
	Lead (Pb)	burned	7	5.83E-06	5.83E-06
	CO2	lb CO2 / ton coal	8	5,298	5,298
	CH4	lbs CH4/ ton coal burned	9	0.04	0.04
	N2O	lbs N2O/ ton coal burned	10	0.03	0.03
Natural Gas	PM	lbs PM/ MMSCF natural gas burned	11	7.60	7.60
	PM10	lbs PM10/ MMSCF natural gas burned	11	7.60	7.60
	PM2.5	lbs PM2.5/ MMSCF natural gas burned	11	7.60	7.60
	VOC	lbs VOC/ MMSCF natural gas burned	12	5.50	5.50
	NOx	lbs NOx/ MMSCF natural gas burned	13	280	280
	SO2	lbs SO2/ MMSCF natural gas burned	14	0.60	0.60
	CO	lbs CO/ MMSCF natural gas burned	15	84	84
	Lead (Pb)	lbs Pb/MMSCF natural gas burned	16	5.00E-04	5.00E-04
	CO2	lbs CO2/ MMSCF natural gas burned	17	120,000	120,000
	CH4	lbs CH4/ MMSCF natural gas burned	18	2.3	2.3
	N2O	lbs N2O/MMSCF natural gas burned	19	2.2	2.2
Not applicable	CO2e (b)	CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.			

a- Emission Factor Source References

1- Stack test results from Boilerhouse II stack test conducted on April 29, 2009. The testing was conducted on the combined stack for BW1 and BW2 boilers.
Only filterable PM was analyzed during stack test; therefore, AP-42 Bituminous and Subbituminous Coal Combustion Table 1.1-6 Cumulative Particle Size Distribution and Size-Specific Emission Factors for Dry Bottom Boilers Burning Pulverized Bituminous and Subbituminous Coal- Cumulative Emission Factor (lb/ton) Baghouse was used to develop a ration from PM10/PM and PM2.5/PM.
Ratio PM10/PM = 0.02A/0.02A = 1
Ration PM2.5/PM = 0.01A/0.02A = 0.5
A = coal ash weight percent, as fired
Condensable PM was added to the stack test results. See source reference 3.

2- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-5 Condensable Particulate Matter Emission Factors for Bituminous and Subbituminous Coal Combustion- CPM-TOT for All pulverized coal-fired boilers. (0.1 X sulfur content -0.03)
Using SABIC specific sulfur contents, see source reference 6, and a heat content of 11,100 BTU/lb of coal.

3- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH2, TNMOC, and H2O from Bituminous and Subbituminous Coal Combustion- TNMOC for PC-fired, dry bottom, wall fired

4- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- NOx for PC, dry bottom, wall-fired, bituminous Pre-NSPS

5- Sulfur content of coal used in Boilerhouse II.

	2005	2006
Sulfur Content	0.85%	0.94%

Using AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- SOx for PC, dry bottom, wall-fired, bituminous Pre-NSPS the emission factors (38 X sulfur content) were calculated.

6- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- CO for PC, dry bottom, wall-fired, bituminous Pre-NSPS

7- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-17 Emission Factors for Trace Elements, POM, and HCOH from Uncontrolled Bituminous and Subbituminous Coal Combustion- Lead for Pulverized coal, dry bottom

8- SABIC sampled coal being fed into Boilerhouse II boilers (BW1 and BW2) on 6/27 and 28/2006. An ultimate analysis was performed to analyze the carbon content of coal on a dry basis (values reported by testing laboratory, respectively 73.08% and 72.88%). The two laboratory test results were averaged and the average carbon content (72.98%) was multiplied by the conversion factor in AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-20 Default CO2 Emission Factors for U.S. Coals- Footnote a (72.6) to calculate a coal-specific CO2 emission factor.

9- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- CH4 for PC-fired, dry bottom, wall fired

10- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- N2O for PC-fired, dry bottom, wall fired

11- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion- PM(Total)
All PM is assumed to be less than 1.0 micrometer in diameter; therefore, PM = PM10 = PM2.5.

12- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- VOC

13- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- NOx for Large Wall-Fired Boilers (>100), Pre-NSPS

14- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- SO2

15- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- CO for Large Wall-Fired Boilers (>100), Pre-NSPS

16- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Lead

17- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- CO2

18- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Methane (CH4)

19- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- N2O (Uncontrolled)

b- GWP for CO2, CH4, and N2O

	GWP (c)
CO2	1
CH4	25
N2O	298

c- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

Fuel Usage for 01-001 BW1-BOILER from 2005 to 2006 (d)

Fuel Usage	Units	**2005**	**2006**
Coal	Tons	78,617	77,220
Natural Gas	MMSCF	-	-

d- Fuel usage data was taken from annual air emission summaries.

Baseline Actual Emissions Summary from 01-001 BW1-BOILER from 2005 to 2006 (e, f)

Pollutant	**2005**	**2006**
	(tons/year)	
PM	51.92	58.71
PM10	51.92	58.71
PM2.5	49.96	56.79
VOC	2.36	2.32
NOx	865	849
SO2	1,270	1,379
CO	19.65	19.30
Pb	2.29E-04	2.25E-04
CO2	208,270	204,568
CH4	1.57	1.54
N2O	1.18	1.16
CO2e	208,661	204,952

e- No natural gas was burned in BW1-BOILER in 2005 or 2006; therefore no calculations are shown for natural gas combustion.

f- Following are example calculations for 2005. All other years were calculated following the same methodology.

Note: Natural gas was not fired in 2005 or 2006; therefore, no example calculations are shown for natural gas in 2005.

PM (tons/year) =	1.32	lbs PM/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	51.92	tons PM
PM10 (tons/year) =	1.32	lbs PM10/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	51.92	tons PM10
PM2.5 (ton/year) =	1.27	lbs PM2.5/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	49.96	tons PM2.5
VOC (tons/year) =	0.06	lbs VOC/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	2.36	tons VOC
NOx (tons/year) =	22.00	lbs NOx/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	865	tons NOx
SO2 (tons/year) =	32.30	lbs SO2/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	1,270	tons SO2
CO (tons/year) =	0.50	lbs CO/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	19.65	tons CO
Pb (tons/ year)=	5.83E-06	lbs Pb/ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	2.29E-04	tons CO
CO2 (tons/year) =	5,298.35	lb CO2 / ton coal	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	208,270	tons CO2
CH4 (tons/year) =	0.04	lbs CH4/ ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	1.57	tons CH4
N2O (tons/year) =	0.03	lbs N2O/ ton coal burned	X	78,617	tons coal	X	(1/ 2000 lbs/ton)	=	1.18	tons N2O
CO2e (tons/year) =	(	208,270	tons CO2	X	1	GWP)		=	208,270	
	(	1.57	tons CH4	X	25	GWP)		=	39	
	(	1.18	tons N2O	X	298	GWP)		=	351	
								Total =	208,661	tons CO2e

Baseline Actual Emission Calculations for 01-001 BW2-BOILER

The baseline actual emissions were calculated pursuant to 326 IAC 2-2-1(e).

Emission Factor for 01-001 BW2-BOILER from 2005 to 2006

Fuel Burned	Pollutant	Units	Emission Factor Source (a)	2005	2006
Coal	PM	lbs PM/ton coal burned	1, 2	1.32	1.52
	PM10	lbs PM10/ton coal burned	1, 2	1.32	1.52
	PM2.5	burned	1, 2	1.27	1.47
	VOC	lbs VOC/ton coal burned	3	0.06	0.06
	NOx	lbs NOx/ton coal burned	4	22	22
	SO2	lbs SO2/ton coal burned	5	32.30	35.72
	CO	lbs CO/ton coal burned	6	0.50	0.50
	Lead (Pb)	lbs Pb/ton coal burned	7	5.83E-06	5.83E-06
	CO2	lb CO2 / ton coal	8	5,298	5,298
	CH4	lbs CH4/ ton coal burned	9	0.04	0.04
	N2O	lbs N2O/ ton coal burned	10	0.03	0.03
Natural Gas	PM	lbs PM/ MMSCF natural gas burned	11	7.60	7.60
	PM10	lbs PM10/ MMSCF natural gas burned	11	7.60	7.60
	PM2.5	lbs PM2.5/ MMSCF natural gas burned	11	7.60	7.60
	VOC	lbs VOC/ MMSCF natural gas burned	12	5.50	5.50
	NOx	lbs NOx/ MMSCF natural gas burned	13	280	280
	SO2	lbs SO2/ MMSCF natural gas burned	14	0.60	0.60
	CO	lbs CO/ MMSCF natural gas burned	15	84	84
	Lead (Pb)	lbs Pb/MMSCF natural gas burned	16	5.00E-04	5.00E-04
	CO2	lbs CO2/ MMSCF natural gas burned	17	120,000	120,000
	CH4	lbs CH4/ MMSCF natural gas burned	18	2.30	2.30
	N2O	lbs N2O/MMSCF natural gas burned	19	2.20	2.20
Not applicable	CO2e (c)	CO2 equivalents (CO2e) is a ratio of the global warming potential (GWP) of CO2, CH4, and N2O, which can not be expressed in a single emission factor. See example calculations for more details.			

a- Emission Factor Source References

1- Stack test results from Boilerhouse II stack test conducted on April 29, 2009. The testing was conducted on the combined stack for BW1 and BW2 boilers.
Only filterable PM was analyzed during stack test; therefore, AP-42 Bituminous and Subbituminous Coal Combustion Table 1.1-6 Cumulative Particle Size Distribution and Size-Specific Emission Factors for Dry Bottom Boilers Burning Pulverized Bituminous and Subbituminous Coal- Cumulative Emission Factor (lb/ton) Baghouse was used to develop a ration from PM10/PM and PM2.5/PM.
Ratio PM10/PM = 0.02A/0.02A = 1
Ration PM2.5/PM = 0.01A/0.02A = 0.5
A = coal ash weight percent, as fired
Condensable PM was added to the stack test results. See source reference 2.

2- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-5 Condensable Particulate Matter Emission Factors for Bituminous and Subbituminous Coal Combustion- CPM-TOT for All pulverized coal-fired boilers. (0.1 X sulfur content -0.03)
Using SABIC specific sulfur contents, see source reference 6, and a heat content of 11,100 BTU/lb of coal.

3- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH2, TNMOC, and H2O from Bituminous and Subbituminous Coal Combustion- TNMOC for PC-fired, dry bottom, wall fired

4- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- NOx for PC, dry bottom, wall-fired, bituminous Pre-NSPS

5- Sulfur content of coal used in Boilerhouse II.

	2005	2006
Sulfur Content	0.85%	0.94%

Using AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- SOx for PC, dry bottom, wall-fired, bituminous Pre-NSPS the emission factors (38 X sulfur content) were calculated.

6- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-3 Emission Factors for SOx, NOx, and CO from Bituminous and Subbituminous Coal Combustion- CO for PC, dry bottom, wall-fired, bituminous Pre-NSPS

7- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-17 Emission Factors for Trace Elements, POM, and HCOH from Uncontrolled Bituminous and Subbituminous Coal Combustion- Lead for Pulverized coal, dry bottom

8- SABIC sampled coal being fed into Boilerhouse II boilers (BW1 and BW2) on 6/27 and 28/2006. An ultimate analysis was performed to analyze the carbon content of coal on a dry basis (values reported by testing laboratory, respectively 73.08% and 72.88%). The two laboratory test results were averaged and the average carbon content (72.98%) was multiplied by the conversion factor in AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-20 Default CO2 Emission Factors for U.S. Coals- Footnote a (72.6) to calculate a coal-specific CO2 emission factor.

9- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- CH4 for PC-fired, dry bottom, wall fired

10- AP-42 Chapter 1.1 Bituminous and Subbituminous Coal Combustion Table 1.1-19 Emission Factors for CH4, TNMOC, and N2O for Bituminous and Subbituminous Coal Combustion- N2O for PC-fired, dry bottom, wall fired

11- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion- PM(Total)
All PM is assumed to be less than 1.0 micrometer in diameter; therefore, PM = PM10 = PM2.5.

12- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- VOC

(NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- NOx for Large Wall-Fired Boilers (>100), Pre-NSPS

14- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- SO2

15- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-1 Emission Factors for Nitrogen Oxides (NOx) and Carbon Monoxide (CO) from Natural Gas Combustion- CO for Large Wall-Fired Boilers (>100), Pre-NSPS

16- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Lead

17- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- CO2

18- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- Methane (CH4)

19- AP-42 Chapter 1.4 Natural Gas Combustion Table 1.4-2 Emission Factors for Criteria Pollutants and Greenhouse Gases for Natural Gas Combustion- N2O (Uncontrolled)

b- GWP for CO2, CH4, and N2O

	GWP (c)
CO2	1
CH4	25
N2O	298

c- The GWP were established by US EPA in Table A-1 to 40 CFR Part 98, Subpart A.

Fuel Usage for 01-001 BW2-BOILER from 2005 to 2006 (d)

Fuel Usage	Units	2005	2006
Coal	Tons	72,929	76,332
Natural Gas	MMSCF	-	-

d- Fuel usage data was taken from annual air emission summaries.

Baseline Actual Emissions Summary from 01-001 BW2-BOILER for 2005 to 2006 (e, f)

Pollutant	2005	2006
	(tons/year)	
PM	48.17	58.04
PM10	48.17	58.04
PM2.5	46.34	56.13
VOC	2.19	2.29
NOx	802	840
SO2	1,178	1,363
CO	18.23	19.08
Pb	2.13E-04	2.23E-04
CO2	193,202	202,217
CH4	1.46	1.53
N2O	1.09	1.14
CO2e	193,564	202,597

e- Natural gas was not fired in 2005 or 2006; therefore, no emission calculations for natural gas are shown.

f- Following are example calculations for 2005. All other years were calculated following the same methodology.

Note: Natural gas was not fired in 2005 or 2006; therefore, no example calculations are shown for natural gas in 2005.

PM (tons/year) =	1.32	lbs PM/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	48.17	tons PM
PM10 (tons/year) =	1.32	lbs PM10/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	48.17	tons PM10
PM2.5 (ton/year) =	1.27	lbs PM2.5/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	46.34	tons PM2.5
VOC (tons/year) =	0.06	lbs VOC/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	2.19	tons VOC
NOx (tons/year) =	22.00	lbs NOx/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	802	tons NOx
SO2 (tons/year) =	32.30	lbs SO2/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	1,178	tons SO2
CO (tons/year) =	0.50	lbs CO/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	18.23	tons CO
Pb (tons/ year) =	5.83E-06	lbs Pb/ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	2.13E-04	tons CO
CO2 (tons/year) =	5,298	lb CO2 / ton coal	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	193,202	tons CO2
CH4 (tons/year) =	0.04	lbs CH4/ ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	1.46	tons CH4
N2O (tons/year) =	0.03	lbs N2O/ ton coal burned	X	72,929	tons coal	X	(1/ 2000 lbs/ton)	=	1.09	tons N2O
CO2e (tons/year) =	(	193,202	tons CO2	X	1	GWP)		=	193,202	
	(	1.46	tons CH4	X	25	GWP)		=	36	
	(	1.09	tons N2O	X	298	GWP)		=	326	
								Total =	193,564	tons CO2e

Baseline Actual Emission Summary for Boilers

Only the boilers affected by the cogeneration project are included as affected units in the baseline calculations: (09-001) BW BOILER, (09-002) E BOILER, (09-002) L BOILER, (01-001) BW1-BOILER, and (01-001) BW2-BOILER.

Year Summarized	Stack/Vent I.D.	Emission Unit	PM (a)	PM10 (a)	PM2.5 (a)	VOC	NOx	SO2	CO	Pb	CO2	CH4	N2O	CO2e
2005								**(tons/year)**						
Boilerhouse I	**09-001**	**BW BOILER**	1.14	1.14	1.14	0.83	42.1	0.09	12.6	7.53E-05	18,060	0.35	0.33	18,167
	09-002	**E BOILER**	311	199	105	1.66	249	2,671	166	1.93E-04	180,812	1.99	1.33	181,257
	09-002	**L BOILER**	118	75.6	40.0	0.63	90	1,014	62.9	7.34E-05	67,783	0.50	0.38	67,908
Boilerhouse II	**01-001**	**BW1 BOILER**	51.9	51.9	50.0	2.36	865	1,270	19.7	2.29E-04	208,270	1.57	1.18	208,661
	01-001	**BW2 BOILER**	48.2	48.2	46.3	2.19	802	1,178	18.2	2.13E-04	193,202	1.46	1.09	193,564
2005 Total Actual Emissions for Affected Units			**530**	**376**	**243**	**7.66**	**2,047**	**6,133**	**279**	**7.84E-04**	**668,127**	**5.87**	**4.31**	**669,558**

Year Summarized	Stack/Vent I.D.	Emission Unit	PM (a)	PM10 (a)	PM2.5 (a)	VOC	NOx	SO2	CO	Pb	CO2	CH4	N2O	CO2e
2006								**(tons/year)**						
Boilerhouse I	**09-001**	**BW BOILER**	0.73	0.73	0.73	0.53	26.74	0.06	8.02	4.78E-05	11,460	0.22	0.21	11,528
	09-002	**E BOILER**	288	184	97.4	1.53	230.1	2,483	153	1.79E-04	167,287	1.84	1.23	167,699
	09-002	**L BOILER**	112	71.7	37.9	0.60	89.6	967	59.8	6.97E-05	64,349	0.48	0.36	64,468
Boilerhouse II	**01-001**	**BW1 BOILER**	58.7	58.7	56.8	2.32	849.4	1,379	19.3	2.25E-04	204,568	1.54	1.16	204,952
	01-001	**BW2 BOILER**	58.0	58.0	56.1	2.29	839.7	1,363	19.1	2.23E-04	202,217	1.53	1.14	202,597
2006 Total Actual Emissions for Affected Units			**517**	**373**	**249**	**7.26**	**2,035**	**6,192**	**260**	**7.44E-04**	**649,881**	**5.61**	**4.10**	**651,243**

Total Actual Emissions for Affected Units, by Year

Year`	PM (a)	PM10 (a)	PM2.5 (a)	VOC	NOx	SO2	CO	Pb	CO2	CH4	N2O	CO2e
						(tons/year)						
2005-b	**530**	**376**	**243**	**7.66**	**2,047**	**6,133**	**279**	**7.84E-04**	**668,127**	**5.87**	**4.31**	**669,558**
2006-b	**517**	**373**	**249**	**7.26**	**2,035**	**6,192**	**260**	**7.44E-04**	**649,881**	**5.61**	**4.10**	**651,243**

Total Actual Emissions for Affected Units, Averages

Years Averaged	PM (a)	PM10 (a)	PM2.5 (a)	VOC	NOx	SO2	CO	Pb	CO2	CH4	N2O	CO2e
						(tons/year)						
2005-2006-c	**524**	**375**	**246**	**7.46**	**2,041**	**6,163**	**269**	**7.64E-04**	**659,004**	**5.74**	**4.20**	**660,400**

a- PM, PM10, and PM2.5 emissions include PM Condensable.

b- 2005 and 2006 are the 24-consecutive months with the highest emissions for all pollutants calculated. 2005-2006 emissions will be used in determining whether the project is a major modification

c- The average of 2005-2006 is the 24-consecutive months with the highest emissions for all pollutants and will be used in determining whether the project is a major modification pursuant to 326 IAC 2-2-2(d).

Baseline Actual Emissions for SHEETFUMES from 2005-2006

Calculating the baseline actual emissions for SHEETFUMES from 2005-2006 as defined in 326 IAC 2-2-1(e)(2) means the average rate, in tons per year, at which SHEETFUMES actually emitted VOC.

	SHEETFUMES VOC Input (ton/year)	Overall Control Efficiency (a)	VOC Emissions (tons/year)	**Baseline Actual Emissions for SHEETFUMES**
2005	91.1	95%	4.56	4.71
2006	97.3	95%	4.86	

a- Overall control efficiency (including capture and destruction) used in i-STEPS submittals for 2005-2006.

COGEN Project Emissions Summary- No Alternative Operating Scenarios (No AOS)

SABIC Innovative Plastics Mt. Vernon, LLC (SABIC) is requesting a construction permit to modify the facility's current site energy capabilities. As part of the COGEN project, SABIC plans to: install a new natural gas-fired turbine with duct firing and HRSG (COGEN) controlled with CO catalyst and an auxiliary boiler (AUX BOILER); convert BW1-BOILER and BW2-BOILER to be natural gas-fired only; and continue to route SHEETFUMES to R BOILER or install a new thermal oxidizer (SHEETFUMES TO). The COGEN project will permanently shut down BW-BOILER, E BOILER, and L BOILER in Boilerhouse I. R BOILER in Boilerhouse I will remain in operation.

Pursuant to 326 IAC 2-2-2(d) and 2-2-1(e), (dd) and (ii), SABIC calculated whether the COGEN project will be a major modification. AP-42, stack test data (when available), and historic fuel use data was used to calculate the past actuals for the affected units.

COGEN Project Emissions Summary- No AOS

	PM	PM10	PM2.5	VOC	NOx	SO2	CO	Pb	CO2e
	(tons/yr)								
COGEN Project PTE	83	83	83	39.6	1239	7	341	1.63E-03	1,331,649
Baseline Actual Emissions for COGEN Project (a)	524	375	246	12.17	2,041	6,163	269	7.64E-04	659,004
PTE Excluding Baseline Actuals	**-440**	**-291**	**-162**	**27**	**-802**	**-6,155**	**71**	**8.69E-04**	**672,645**
PSD/NSR Trigger (b)	25	15	10	40	40	40	100	**0.6**	75,000
Trigger PSD/NSR?	No	No	No	No	No	No	No	No	**Yes**

a- The affected units for the COGEN project are: 09-001 BW BOILER, 09-002 E BOILER, 09-002 L BOILER, 01-001 BW1-BOILER, and 01-001 BW2-BOILER. The remaining boilers in Boilerhouse I (09-106 R BOILER) and Boilerhouse II (01-101 NE BOILER, 01-114 BW GAS, and 01-100 H BOILER) will not be altered as part of the COGEN project; therefore, are not included in this analysis.
The average of 2005-2006 is the 24-consecutive months with the highest emissions for all pollutants and is used in the analysis in accordance with 326 IAC 2-2-1(e)(2).

b- PSD/NSR Triggers are from the definition of "significant" pursuant to 326 IAC 2-2-1(ww)(1).
The trigger for ozone is shown in the VOC column.
The pollutants in 326 IAC 2-2-1(ww)(1) that are not in the COGEN Project Emissions Summary are negligible.

Net Emission Increase Calculations for COGEN Project- No AOS (c)

	CO2e
	(tons/yr)
COGEN Project PTE	1,331,649
Baseline Actual Emissions for COGEN Project (d)	659,004
Contemporaneous Increases (e)	1,197
PTE Excluding Baseline Actuals	673,842
PSD/NSR Trigger (f)	75,000
Trigger PSD/NSR?	**Yes**

c- CO2e is the only pollutant for the COGEN project for which a "net emissions increase" is required to be calculated for determination of whether the project is a major modification pursuant to 326 IAC 2-2-1(dd) and(ii).
d- The affected units for the COGEN project are: 09-001 BW BOILER, 09-002 E BOILER, 09-002 L BOILER, 01-001 BW1-BOILER, and 01-001 BW2-BOILER. The remaining boilers in Boilerhouse I (09-106 R BOILER) and Boilerhouse II (01-101 NE BOILER, 01-114 BW GAS, and 01-100 H BOILER) will not be altered as part of the COGEN project; therefore, are not included in this analysis.
The average of 2005-2006 is the 24-consecutive months with the highest emissions for all pollutants and is used in the analysis in accordance with 326 IAC 2-2-1(e)(2).

e- No current projects at SABIC meet the definition of contemporaneous pursuant to 326 IAC 2-2-1(ii)(2) for CO2e.
A pre-construction application for Project Delta was submitted to IDEM in April 2014. Although there are no actual emissions from Project Delta at the time of this submittal, Project Delta may operate before the construction of COGEN begins. Therefore, the CO2e PTE from Project Delta is included as a contemporaneous increase.
f- PSD/NSR Triggers are from the definition of "significant" pursuant to 326 IAC 2-2-1(ww)(1).

COGEN Project Emissions Summary- AOS 1 (COGEN Controlled with CO CAT and SCR)

SABIC Innovative Plastics Mt. Vernon, LLC (SABIC) is requesting a construction permit to modify the facility's current site energy capabilities. As part of the COGEN project with AOS 1, SABIC plans to: install a new natural gas-fired turbine with duct firing and HRSG (COGEN) control with CO catalyst and SCR, an auxiliary boiler (AUX BOILER), and convert BW1-BOILER and BW2-BOILER to be natural gas-fired only; continue to route SHEETFUMES to R BOILER or install a new thermal oxidizer (SHEETFUMES TO). The COGEN project will permanently shut down BW-BOILER, E BOILER, and L BOILER in Boilerhouse I. R BOILER in Boilerhouse I will remain in operation.
SABIC is permitting an alternate operating scenario (AOS). If SABIC choses to use this AOS, COGEN would be controlled by the CO CAT and SCR.
Pursuant to 326 IAC 2-2-2(d) and 326 IAC 2-2-1(e), (dd) and (ii), SABIC calculated whether the COGEN project will be a major modification. AP-42, stack test data (when available), and historic fuel use data was used to calculate the past actuals for the affected units.

COGEN Project Emissions Summary- AOS 1 (COGEN Controlled with CO CAT and SCR)

	PM	PM10	PM2.5	VOC	NOx	SO2	CO	Pb	CO2e
	(tons/yr)								
COGEN Project AOS PTE	127	127	127	39.6	511	7.09	341	1.63E-03	1,331,649
Baseline Actual Emissions for COGEN Project (a)	524	375	246	12	2,041	6,163	269	7.64E-04	659,004
PTE Excluding Baseline Actuals	**-397**	**-248**	**-119**	**27**	**-1,530**	**-6,155**	**71.5**	**8.69E-04**	**672,645**
PSD/NSR Trigger (b)	25	15	10	40	40	40	100	0.6	75,000
PSD/NSR Pollutant?	No	No	No	No	No	No	No	No	**Yes**

a- The affected units for the COGEN project are: 09-001 BW BOILER, 09-002 E BOILER, 09-002 L BOILER, 01-001 BW1-BOILER, and 01-001 BW2-BOILER. The remaining boilers in Boilerhouse II (01-101 NE BOILER, 01-114 BW GAS, and 01-100 H BOILER) will not be altered as part of the COGEN project; therefore, are not included in this analysis.
The average of 2005-2006 is the 24-consecutive months with the highest emissions for all pollutants and is used in the analysis in accordance with 326 IAC 2-2-1(e)(2).
b- PSD/NSR Triggers are from the definition of "significant" pursuant to 326 IAC 2-2-1(ww)(1).
The trigger for ozone is shown in the VOC column.
The pollutants in 326 IAC 2-2-1(ww)(1) that are not in the COGEN Project Emissions Summary are negligible.

Net Emission Increase Calculations for COGEN Project- AOS 1 (COGEN Controlled with CO CAT and SCR) (c)

	CO2e
	(tons/yr)
COGEN Project PTE	1,331,649
Baseline Actual Emissions for COGEN Project (d)	659,004
Contemporaneous Increases (e)	1,197
PTE Excluding Baseline Actuals	673,842
PSD/NSR Trigger (f)	75,000
Trigger PSD/NSR?	**Yes**

c- CO2e is the only pollutant for the COGEN project for which a "net emissions increase" is required to be calculated for determination of whether the project is a major modification pursuant to 326 IAC 2-2-1(dd) and(ii).

d- The affected units for the COGEN project are: 09-001 BW BOILER, 09-002 E BOILER, 09-002 L BOILER, 01-001 BW1-BOILER, and 01-001 BW2-BOILER. The remaining boilers in Boilerhouse II (01-101 NE BOILER, 01-114 BW GAS, and 01-100 H BOILER) will not be altered as part of the COGEN project; therefore, are not included in this analysis.
The average of 2005-2006 is the 24-consecutive months with the highest emissions for all pollutants and is used in the analysis in accordance with 326 IAC 2-2-1(e)(2).
e- No current projects at SABIC meet the definition of contemporaneous pursuant to 326 IAC 2-2-1(ii)(2) for CO2e.
A pre-construction application for Project Delta was submitted to IDEM in April 2014. Although there are no actual emissions from Project Delta at the time of this submittal, Project Delta may operate before the construction of COGEN begins.
Therefore, the CO2e PTE from Project Delta is included as a contemporaneous increase.
f- PSD/NSR Triggers are from the definition of "significant" pursuant to 326 IAC 2-2-1(ww)(1).

COGEN Project Emissions Summary- AOS 2 Install CG1 BOILER and AUX2 BOILER and Permanently Shut Down BW1-BOILER and BW2-BOILER

SABIC Innovative Plastics Mt. Vernon, LLC (SABIC) is requesting a construction permit to modify the facility's current site energy capabilities. As part of the COGEN project AOS 2, SABIC plans to install a new natural gas-fired turbine with duct firing and HRSG controlled with CO catalyst (COGEN), an auxiliary boiler (AUX BOILER), two natural gas-fired package boilers (CG1 BOILER and AUX2 BOILER), and have the option to route SHEETFUMES to a new thermal oxidizer (SHEETFUMES TO). The COGEN project AOS 2 will permanently shut down: BW-BOILER, E BOILER, and L BOILER in Boilerhouse I; and BW1-BOILER and BW2-BOILER in Boilerhouse II.

Pursuant to 326 IAC 2-2-2(d) and 2-2-1(e), (dd) and (ii), SABIC calculated whether the COGEN project with AOS 2 will be a major modification. AP-42, stack test data (when available), and historic fuel use data was used to calculate the past actuals for the affected units.

COGEN Project- AOS 2 (Install CG1/AUX2 BOILERs and Shut Down BW1/2-BOILER) Significant Emissions Increase Calculations

	PM	PM10	PM2.5	VOC	NOx	SO2	CO	Pb	CO2e
	(tons/yr)								
COGEN Project PTE- AOS 2 (a)	89.0	89.0	89.0	32.3	1,252	7.15	244	1.68E-03	1,343,057
(b)	25	15	10	40	40	40	100	0.6	75,000
Trigger PSD/NSR?	**Yes**	**Yes**	**Yes**	No	**Yes**	No	**Yes**	No	**Yes**

a- AOS 2 for the COGEN project does not include modifying any existing emissions unit; therefore, PSD applicability pursuant to 326 IAC 2-2-2(d)(4) applies. The baseline actuals for new emissions units are zero pursuant to 326 IAC 2-2-1(e)(3); therefore, the significant emissions increase for the COGEN project AOS 2 equals the PTE.

b- PSD/NSR Triggers are from the definition of "significant" pursuant to 326 IAC 2-2-1(ww)(1).
The trigger for ozone is shown in the VOC column.
The pollutants in 326 IAC 2-2-1(ww)(1) that are not in the COGEN project significant emissions increase calculations are negligible.

Net Emission Increase Calculations for COGEN Project-AOS 2 (Install CG1/AUX2 BOILERs and Shut Down BW1/2-BOILER) (c)

	PM	PM10	PM2.5	NOx	CO	CO2e
	(tons/yr)					
PTE	89.0	89.0	89.0	1,252	244	1,343,057
Baseline Actual Emissions for COGEN Project (d)	524	375	246	2,041	269	659,004
Contemporaneous Increases (e)	7.73	2.27	2.27	4.89	8.21	1197
PTE Excluding Baseline Actuals and Including Contemporaneous Increases	**-427**	**-283**	**-154**	**-784**	**-17**	**685,250**
PSD/NSR Trigger (f)	**25**	**15**	**10**	**40**	**100**	75,000
Trigger PSD/NSR?	No	No	No	No	No	**Yes**

c- Only the pollutants with a "significant emissions increase" require calculating a "net emissions increase"; therefore, only PM, PM10, PM2.5, NOx, CO and CO2e "net emissions increase" calculations are shown. A "net emissions increase" is required to be calculated for determination of whether the project is a major modification pursuant to 326 IAC 2-2-1(dd) and(ii).
d- The affected units for the COGEN project are: 09-001 BW-BOILER, 09-002 E BOILER, 09-002 L BOILER, 01-001 BW1-BOILER, and 01-001 BW2-BOILER. The remaining boilers in Boilerhouse I (09-006 R BOILER) and Boilerhouse II (01-101 NE BOILER, 01-114 BW GAS, and 01-100 H BOILER) will not be altered as part of the COGEN project; therefore, are not included in this analysis.
The average of 2005-2006 is the 24-consecutive months with the highest emissions for all pollutants and is used in the analysis in accordance with 326 IAC 2-2-1(e)(2).

e- The table below summarizes the contemporaneous increases pursuant to 326 IAC 2-2-1(ii)(2) for the COGEN project AOS 2.
SABIC has chosen to use the PTE for the S16 Sheet Line and Silo 75 in lieu of calculating actual emissions for these projects. Although there are no actual emissions from Project Delta at the time of this submittal, Project Delta may operate before the construction of COGEN begins. Therefore, the PTE from Project Delta is included as contemporaneous increases for pollutants with a significant emissions increase for the COGEN project AOS 2.

Contemporaneous Increases for COGEN Project-AOS 2

	PM	PM10	PM2.5	NOx	CO	CO2e
						(tons/yr)
S16 Sheet Line PTE	3.78	0.29	0.29	-	-	-
Silo 75 PTE	1.97	-	-	-	-	-
Project Delta PTE	1.98	1.98	1.98	4.89	8.21	1,197
Contemporaneous Total	*7.73*	*2.27*	*2.27*	*4.89*	*8.21*	*1197*

f- PSD/NSR Triggers are from the definition of "significant" pursuant to 326 IAC 2-2-1(ww)(1).

Indiana Department of Environmental Management
Office of Air Quality

Appendix B – BACT Analyses
Technical Support Document (TSD)
Prevention of Significant Deterioration (PSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Background and Description

Source Name:	**SABIC Innovative Plastics Mt. Vernon, LLC**
Source Location:	**1 Lexan Lane, Mt. Vernon, IN 47620**
County:	**Posey**
SIC Code:	**2821**
Operation Permit No.:	**T129-30384-00002**
Operation Permit Issuance Date:	**November 1, 2011**
Significant Source Modification No.:	**091-33998-00002**
Significant Permit Modification No.:	**091-34002-00002**
Permit Reviewer:	**Josiah Balogun**

Proposed Expansion

SABIC Innovative Plastics Mt. Vernon, LLC is proposing to install a stationary natural gas combustion turbine and a natural gas-fired auxiliary boiler. The proposed combined heat and power facility would include a nominal 85 megawatt (MW) stationary natural gas combustion turbine with duct burner and heat recovery steam generator (HRSG), referred to as COGEN, installation of a 249 MMBTU/hr natural gas-fired auxiliary boiler (AUX BOILER) and the conversion of two existing 249-MMBtu/hr coal-fired boilers (BW1-BOILER and BW2-BOILER) to natural gas-fired only, and installation of a new thermal oxidizer (SHEETFUMES TO) for control of VOC emissions from existing coating operations.

SABIC is currently evaluating an alternative scenario – permanently shutting down the two coal-fired boilers (i.e., not converting BW1-BOILER and BW2-BOILER to natural gas-fired only) and instead installing two additional new 249-MMBtu/hr natural gas-fired only package boilers. This new alternative scenario will not affect installing the COGEN unit (combustion turbine and heat recovery steam generator with duct burner), AUX BOILER, and SHEETFUMES TO; and permanently shutting down coal–fired boilers in Boilerhouse I).

PSD applicability based on GHG emissions requires that potential emissions be greater than 100,000 tons per year of CO2e for the modification of the existing plant and mass-based GHG emissions greater than the applicable PSD major source threshold of 100 tons per year. The potential CO2e emissions from the proposed new COGEN Project exceed 100,000 tons per year and 100 tons per year mass-based. Therefore, the new COGEN Project will be considered a major modification under PSD for GHG.

SABIC Innovative Plastics Mt. Vernon, LLC is located at 1 Lexan Lane, Mt. Vernon, Indiana in Posey County. SABIC Innovative Plastics Mt. Vernon, LLC submitted a PSD application to IDEM, OAQ on December 17, 2013. Additional information was submitted on August 20, 2014.

Requirement for Best Available Control Technology (BACT)

326 IAC 2-2 requires a best available control technology (BACT) review to be performed on the proposed new COGEN Project because the modification to an existing plant has the potential to emit CO2e emissions greater than 100,000 tons per year, which exceeds the PSD threshold for this pollutant.

See Appendix A – Emission Calculations – of this TSD for detailed Potential to Emit (PTE) calculations.

Proposed New Emission Units

326 IAC 2-2 requires a best available control technology (BACT) review to be performed on the proposed emission units:

(a) The natural gas-fired AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) as identified below. Each emission unit is identified with an affiliated stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN project includes new equipment subject to New Source Performance Standards (NSPS) that apply to an affected facility. AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is an affected facility pursuant to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The requirements of 40 CFR 60, Subpart Db that are applicable to AUX BOILER (and AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in this permit.

(c) The COGEN project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to an affected source, as defined pursuant to the NESHAP. AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) is a new affected source subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The requirements of 40 CFR 63, Subpart DDDDD that are applicable to AUX BOILER (and each of AUX2 BOILER and CG1 BOILER, if W.1.19 is elected) are specified in Section D.1 of this permit.

Significant Activities

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices	Maximum Capacity	Date of Construct
19-002	AUX BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-003	AUX 2 BOILER	Auxiliary boiler, natural gas-fired with low-NOx burner	None	None	249 MMBtu/hr	NA
19-004	CG1 BOILER	Natural gas-fired boiler with low-NOx burner	None	None	249 MMBtu/hr	NA

COGEN

(a) The natural gas-fired COGEN emission unit is located in the COGEN Area as identified below. COGEN consists of a natural gas-fired turbine and a heat recovery steam generator (HRSG) with duct burner. Each emission unit is identified with an affiliated

stack/vent I.D; the emission unit description; the type of air pollution control device (APCD), if present; the type of recovery device (considered integral to the process), if present; and whether the emission unit is significant or insignificant under 326 IAC 2-7. This facility may also include insignificant activities listed in Section A.21 of this permit.

(b) The COGEN Project includes new equipment subject to New Source Performance Standards (NSPS) that apply to the affected facility. COGEN is an affected facility pursuant to 40 CFR 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. The requirements of 40 CFR 60, Subpart KKKK, that are applicable to COGEN (including the HRSG with Duct Burner), are specified in this section of the permit. Because the requirements of 40 CFR 60, Subpart KKKK, apply to COGEN (including the HRSG with Duct Burner), the requirements of 40 CFR 60, Subpart Db, are not applicable to the Duct Burner.

(c) The COGEN Project includes new equipment subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply to the affected source. COGEN is an affected source pursuant to 40 CFR 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines. The requirements of 40 CFR 63, Subpart YYYY, that are applicable to COGEN are specified in this section of the permit. Pursuant to 40 CFR 63.6095(d), Stay of standards for gas-fired subcategories, the COGEN is only subject to the initial notification requirements contained in 40 CFR 63.6145 until EPA takes final action to require compliance and publishes a document in the Federal Register.

(d) Pursuant to the definitions contained in 40 CFR 63.7575, waste heat boilers are excluded from the definition of “boiler”. Waste heat boilers are defined to include duct burners; therefore, the HRSG, a waste heat boiler with duct burner, is not considered an affected source pursuant to 40 CFR 63, Subpart DDDDD.

(e) Pursuant to 40 CFR 63.6092, the HRSG with duct burner is not considered an affected source pursuant to 40 CFR 63, Subpart YYYY.

Significant Activities

Stack / Vent I.D	Emission Unit	Emission Unit Description	Air Pollution Control Devices	Integral Devices	Maximum Capacity	Date of Construct
19-001	COGEN	1,812 MMBtu/hr stationary natural gas-fired combustion turbine including a nominal 486 MMBtu/hr natural gas-fired duct burner and heat recovery steam generator (HRSG).	Oxidation Catalyst	None	1,812 MMBtu/hr	NA

Summary of the Best Available Control Technology (BACT) Process

BACT is an emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. There will still be air pollution from this project; however, SABIC Innovative Plastics Mt. Vernon, LLC will be required to demonstrate that the emissions will be reduced to the maximum extent in accordance with BACT requirements.

Federal EPA generally requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility. IDEM evaluates BACT based on a "top down" approach.

The five (5) basic steps of a top-down BACT analysis used by the Office of Air Quality (OAQ) to make BACT determinations are listed below:

Step 1: Identify Potential Control Technologies
The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options
The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative controls are normally given a waiver from the BACT requirements due to the uncertainty of actual control efficiency. IDEM evaluates any innovative controls if proposed by the source. SABIC Innovative Plastics Mt. Vernon, LLC has not submitted any innovative control technology. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness
The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of control effectiveness (percent pollutant removed). If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except, for the environmental analyses and any more stringent limits established from other RBLC Permits.

Step 4: Evaluate the Most Effective Controls and Document the Results
The fourth step begins with an evaluation of the remaining technologies under consideration for each pollutant of concern in regards to energy, environmental, and economic impacts for determining a final control technology. The highest ranked alternative is evaluated for environmental, energy and economic impacts specific to the proposed modification. If the analysis determines that the highest ranked control is not appropriate as BACT, due to any of the energy, environmental, and economic impacts, then the next most effective control is evaluated. The evaluation continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further economic or environmental analysis. In no case can the selected BACT be less stringent than any New Source Performance Standard (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP) or Reasonably Available Control Technologies (RACT) standard or emission limit.

Step 5: Select BACT
The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be

feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible.

GHGs BACT –Combustion Turbines

Step 1: Identify Potential Control Technologies

The CO_2 is by far the dominant GHG from combustion sources. CH_4 and N_2O are present only in very small amounts, are incidental to combustion, and trend with the CO_2 emissions. There are no known supplemental controls for N_2O or methane emissions from gas-fired units. Therefore, the BACT analysis for all units is focused on CO_2 as a surrogate for all GHG emissions (CO_2e).

(1) Carbon Capture and Storage (CCS);

(2) Fuel Selection; and

(3) High Thermal Efficiency Design.

Step 2: Eliminate Technically Infeasible Options

Carbon Capture and Sequestration (CCS)

CCS involves separation and capture of CO_2 from the combustion exhaust gases using physical or chemical adsorption, pressurization of the captured CO_2, transportation of the captured CO_2 via pipeline, and injection and long-term geologic storage of the captured CO_2. Alternatively, captured CO_2 could be sold or allocated for use in other purposes if an external demand exist. CCS technology, specifically post-combustion CO_2 capture technology, is generally not commercially available as it has not yet been successfully implemented on a large-scale basis. According to the *Report of the Interagency Task Force on Carbon Capture and Storage* (August 2010), CO_2 capture technology is being operated at a small scale at several coal-fired power plants and there are plans to implement this technology on a larger scale at several coal-fired power plants in the coming years.

The combustion of natural gas and large turbine air flow volumes result in exhaust streams with dilute concentrations of CO_2 typically 3 to 5 percent versus 13 to 16 percent CO_2 for typical coal-fired utility boilers. As outlined in EPA's GHG permitting guidance, a control technology would not be applicable if there are significant differences that preclude successful operations of the control device, such as differences in temperature, pressure, pollutant concentration, or volume of the exhaust stream. Given this significant difference in exhaust CO_2 concentration, it is unlikely that the CO_2 capture technologies currently being investigated for coal-fired power plants can also be applied to natural gas-fired turbine systems.

If the CO_2 could be successfully captured and concentrated, significant obstacles exist in transporting the gas by pipeline and securing a geologically suitable sequestration site. Several small pilot scale CO_2 sequestration demonstration projects have recently been conducted in the Illinois Basin geologic area. A coalbed methane storage test in Wabash County, Illinois in which CO_2 was injected and methane recovered was completed, but injection of only about 1 ton/day of CO_2 was demonstrated. Three field validation tests have been conducted for CO_2 injection in Enhanced Oil Recovery (EOR) at the Loudon oil field in central Illinois, the Mumford Hills oil field in southwest Indiana, and the Sugar Creek oil field in western Kentucky. In the Indiana project, liquid CO_2 was injected at rates of 20-30 tons/day. Each of the EOR tests was completed with similar results. These tests only demonstrate that concentrated CO_2 can be sequestered at low

injection rates. The CO_2 exhaust stream at SABIC is dilute and the mass generated (up to 2,544 tons/day) is on the order of 100 times larger than these test rates.

Archer Daniels Midland Company (ADM) and Schlumberger Carbon Services are currently conducting a large-scale demonstration project of deep saline geological storage with a goal of injecting 1.1 million tons of CO_2 over a three-year period. This project is occurring at the ADM plant location in Decatur, Illinois. CO_2 is being captured from the fermentation process used to produce ethanol at ADM's corn processing facility. A dedicated compression and dehydration facility built for this project removes water from the CO_2 stream and then compresses the dry CO_2 to a liquid-like dense phase. The compressed CO_2 then travels through a mile-long pipeline to the wellhead where it is injected deep into the Mount Simon Sandstone saline formation at a depth of 7,000 feet. The project includes deep injection, observation, and geophysical wells, which are instrumented to monitor and further characterize the Mount Simon formation and the effects of CO_2 injection. The CO_2 injection rate is approximately 2,200 tons/day. This project is managed by the U.S. Department of Energy (DOE) using Recovery Act funds and other private sector cost sharing funds totaling $207.9 million ("DOE and ADM Illinois Project Advances", Carbon Capture Journal, June 22, 2013).

During the industrial fermentation process, very high concentrations of CO_2 are generated in the off-gas, with small amounts of alcohol and water vapor. This process cannot be compared to the dilute CO_2 concentrations in the exhaust from natural gas combustion.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a carbon capture and storage (CCS) is not a technically feasible option for the COGEN system at this source.

Fuel Selection
Gas turbines are generally capable of burning gaseous or liquid fuels (typically natural gas and fuel oil). Review of EPA's default CO_2 emission factors for combustion of various types of solid, liquid, and gaseous fuels (see Table C-1 in 40 CFR Part 98) indicates that natural gas has the lowest GHG emissions potential in terms of kg CO_2 per MMBtu of any fuel, with the possible exception of biogas (captured methane) and coke oven gas. Biogas and coke oven gas will not be available for this project, so those fuels are eliminated from consideration. As a "clean fuel", natural gas is proposed as the exclusive fuel type for the COGEN system.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a fuel selection (natural gas fuel) is a technically feasible option for the COGEN system at this source.

High Thermal Efficiency Design
By utilizing a high efficiency natural gas-fired system that meets the basic design purpose of the proposed project, less fossil fuels are required to generate the same desired output of electricity and steam, thereby minimizing GHG emissions. As previously mentioned, the electric generating efficiencies of different cogeneration systems are difficult to compare because both power and steam are being generated, and each cogeneration system is a unique design with selected component types that are sized and configured according to site-specific facility needs. In addition, the efficiency of combined cycle gas turbines is not comparable to simple cycle gas turbines because combined cycle systems are typically used to generate electricity only, not combined steam and power.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a high thermal efficiency design is a technically feasible option for the COGEN system at this source.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the technical feasibility analysis in Step 2, the remaining control technologies may be ranked as follows for controlling GHG emissions from the COGEN system.

(1) Fuel Selection (Natural Gas); and

(2) High Thermal Efficiency Design.

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed CO2e BACT determination along with the existing CO2e BACT determinations for similar plants. All data in the table is based on the information obtained from the permit application submitted by SABIC Innovative Plastics Mt. Vernon, LLC, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies. All limitations in parenthesis were not obtained from the RBLC but were calculated to provide a consistent basis for comparing emissions rates to the proposed project.

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating MMBtu/hr	Limitation	Control Method
Draft Permit No. 129-33998-00002 Proposed Limit	**SABIC Innovative Plastics Mt. Vernon, LLC *proposed***	**Proposed**	**One (1) COGEN natural gas-fired, with a duct burner and heat recovery system**	**1,812 MMBtu/hr**	**A minimum net plant efficiency of 85% (LHV) and 937,379 tons CO2e per rolling 12-month period**	**Use of natural gas only**
VA-0319	Gateway Cogeneration - Smart water Project	8/27/2012	2 NG-fired combined cycle turbine & HRSGs, no duct buring	593 **MMBtu/hr (160 MW)**	295,961 tons/yr - 12 month rolling ave; 1050 lb/MWh -12 month ave; Heat rate <=8983 BTU/KWh (HHV, gross)	Low carbon fuels & high efficiency design
LA-0256	Westlake Vinyls Cogeneration Plant	12/6/2011	3 NG-fired turbines & HRSGs w/duct burners	475 **MMBtu/hr (50MW,ea)**	55,577 lb/hr maximum; 243,426 tons CO2e/year	Natural gas fuel & good combustion practices

The mass emissions limit is based on the maximum heat input rate to the COGEN system that is needed to produce the combined power generation and steam demand that the facility is designed to serve. SABIC proposes to comply with the mass-based emission limit for the COGEN system via fuel usage monitoring and records of the calculated heat input and mass GHG emissions.

SABIC Innovative Plastics proposes to procure, install and operate a high efficiency, low heat rate combined heat and power cogeneration facility. The expected net heat rate for COGEN operating at full load with duct firing is not more than 4,300 Btu/kW-hr (HHV-net), considering the combined electric and steam output on a KW-hr basis. This value reflects best design practices and cannot be compared to other facilities (e.g., Gateway Cogeneration-Smart Water Project, a combine cycle cogeneration system) due to COGEN's unique site-specific design.

As stated previously, there is no meaningful GHG BACT technology for sources contained in any PSD permits for similar combined heat and power plants beyond good engineering practice and the use of 40 CFR 98 emission factors.

The GHG BACT emissions from the combined cycle combustion turbine shall not exceed 928,578 tons, on a carbon dioxide equivalent basis (CO2e) in any consecutive rolling 12-month period.

Methane and nitrous oxide emissions from the COGEN shall be calculated in accordance with the methodology and emission factors noted in 40 CFR 98, Subpart D.

The use of both natural gas fuel and a high thermal efficiency design are proposed for the COGEN system.

The following has been proposed as BACT for GHG emissions from the proposed combined cycle combustion turbines:

1. The COGEN system shall use natural gas only

2. The COGEN system shall achieve a minimum net plant efficiency of 85% (LHV) at design conditions.

3. The total CO2e emissions from the COGEN system shall be limited to 937,379 tons of CO_2e per twelve (12) consecutive month period with compliance determined on a monthly basis.

Step 5: Select BACT

Pursuant to 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), IDEM has established the following as BACT for the GHG for the COGEN System:

1. COGEN shall use natural gas only;

2. COGEN shall achieve a minimum net plant efficiency of 85% (LHV); and

3. The total CO2e emissions from COGEN shall be limited to 937,379 tons of CO2e per twelve (12) consecutive month period with compliance determined on a monthly basis.

GHGs BACT – Natural Gas-Fired Auxiliary Boiler (AUX BOILER)

Step 1: Identify Potential Control Technologies

GHG emissions from combustion consist primarily of carbon dioxide (CO_2) and very low emissions of methane (CH_4) and nitrous oxide (N_2O). Using each compound's global warming potential (GWP), the emissions are converted to CO2e. Since over 90 percent (%) of GHG emissions in this process come from CO_2, only control technologies for CO_2 will be considered in this analysis. There are no known supplemental controls for N_2O or methane emissions from gas-fired units. Therefore, this BACT analysis focused on CO_2 as a surrogate for all GHG emissions.

1. Carbon Capture and Storage (CCS);

2. Fuel Selection;

3. High Thermal Efficiency Design (including efficient burner design);

4. Operating and Maintenance (O&M) Practices;

5. Improved Combustion Measures: Combustion Tuning;

6. Improved Combustion Measures: Optimization & Digital Control System;

7. Air Preheat & Economizers;

8. Turbulators for Firetube Boilers;

9. Boiler Insulation;

10. Minimization of Air Infiltration;

11. Boiler Blowdown Heat Exchange;

12. Condensation Return System;

13. Minimization of Gas-side heat Transfer Surface Deposits; and

14 Steam Line Maintenance.

Step 2: Eliminate Technically Infeasible Options

Carbon Capture and Sequestration (CCS)
Capture of CO_2 emissions from a natural gas-fired boiler would present serious technical problems similar to those discussed for gas turbines. CO_2 concentrations in gas-fired boiler exhausts are also lower than CO_2 concentrations for coal-fired units, and the quantity of dilute CO_2 available for capture is also much lower. None of the boilers have been tried for the Carbon Capture and Sequestration (CCS). There are no listings available in RBLC or State Permit.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a carbon capture and storage (CCS) is not a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Fuel Selection
Boilers are generally capable of burning various solid, liquid, or gaseous fuels. Natural gas has the lowest GHG emissions potential in terms of kg CO_2 per MMBtu of any available fuel. Further review of EPA's default CO_2 emission factors in Table C-1 in 40 CFR Part 98 indicates that the GHG emissions potential of natural gas is approximately 43 percent lower than bituminous coal in terms of kg CO_2 per MMBtu. As a "clean fuel", natural gas is proposed as the exclusive fuel type for the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of fuel selection is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Operating and Maintenance (O&M) Practices
Boiler efficiency decreases over time; however, the rate of deterioration can be curbed by proper O&M practices. A well operated and maintained plant will experience less deterioration of boiler efficiency. Deterioration results in higher heat rate, higher CO_2 emissions, and operating costs; in lower reliability; and in some cases, in reduced output. After a few years of neglect, it may reach the point where significant investment is required to rehabilitate the plant and bring it as close as possible to the design performance.

Rehabilitation may focus on life extension and reliability improvement of the plant or may include additional measures that improve plant efficiency, occasionally above the original design efficiency. The efficiency can be improved by retrofitting combustion control technologies such as heat recovery systems, control technology, and upgraded burners.

Additional GHG reductions can be achieved through energy improvements in the steam/hot water distribution system, the boiler auxiliaries, or in process efficiency improvements. Operation and maintenance according to the manufacturer's emission-related instructions or per a facility-developed maintenance plan (in a manner consistent with safety and good air pollution control practices for minimizing emissions) will prevent generation of additional GHG emissions due to efficiency losses over the lifetime of each piece of combustion equipment.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Operating and Maintenance (O&M) practices is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Efficient Burner Design
New efficient burner designs for all types of boilers and fuels are commercially available to help minimize fuel combustion and GHG emissions. Burners with single and multiple fuel capability, low- and ultra-low-NO_X models, and sizes ranging from very small to very large are widely deployed in industry. Further, the burner size and turndown capability (i.e., ability to operate and/or efficiency of operation at less than full load) are also key aspects of burner design as they will impact the losses associated with inefficient low load and on/off cycling duty. A higher turndown ratio reduces burner startups, provides better load control, saves wear-and-tear on the burner, and reduces purge-air requirements, all resulting in better overall efficiency. Therefore, site-specific conditions and objectives may favor one model over the other. A reduction in CO_2 emissions of up to 6% is possible. The source will install an efficient low-NO_X natural gas burner on the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of efficient burner designs is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Improved Combustion Measures: Combustion Tuning
Tuning of the combustion system requires a visual check by an experienced boiler engineer to ensure that everything is in good working condition and set according to the manufacturer’s recommendations or the optimum settings developed for the particular boiler. Simple parametric testing may be required, which may involve changes in the key control variables of the combustion system and observation of key parameters such as CO emissions, steam outlet conditions, flue gas outlet (stack) temperature, and NO_X emissions. Up to a 3% reduction in CO_2 emissions is possible.

As part of the O&M practices, combustion tuning of the new boiler will be conducted on an as-needed basis to address any decreases in boiler efficiency over time.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Improved Combustion Measures: Combustion Tuning is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Improved Combustion Measures: Optimization & Digital Control System
Optimization can be accomplished through parametric testing, analysis of the results, parameter estimation, periodic testing, and/or manual tuning. Software-based optimization systems may be cost-effective for large boilers.

Digital control systems are generally necessary to achieve the greatest improvement in performance through tuning and optimization. Temperature sensors, oxygen monitors, oxygen trim controls, and other instrumentation may be required to maximize boiler efficiency.

The addition of optimization systems, modern control systems, and instrumentation has resulted in efficiency improvements of 0.5 to 5%.

The new boiler will be equipped with oxygen trim controls and oxygen analyzers.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Improved Combustion Measures: Optimization & Digital Control System is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Air Preheat & Economizers
Energy efficiency can be increased by using waste heat gas recovery systems to capture and utilize heat in the flue gas. The most commonly used waste heat recovery methods are preheating combustion air and water heating via economizer. Economizers and air preheaters often occupy a substantial physical footprint.

There are two general types of air preheaters: recuperators and regenerators. Recuperators are gas-to-gas heat exchangers usually placed on the boiler stack. Internal tubes or plates transfer heat from the outgoing exhaust to the incoming combustion air. Regenerators include two or more separate heat storage sections. The hot flue gas heats the heating plates which, in turn, heat the incoming combustion air. General benefits include improved efficiency and faster startup. Efficiency typically increases by 1% for each 40°F reduction in flue gas temperature.

In an economizer, tubular heat transfer surfaces preheat the boiler feedwater before it enters the steam drum or furnace surfaces. Economizers also reduce the potential of thermal shock and strong water temperature fluctuations as the feedwater enters the drum or waterwalls.

Economizers are typically installed on larger units. Air preheaters typically increase efficiency by 1% for each 40°F reduction in flue gas temperature. Economizers typically operate at a thermal efficiency of 5%.

Economizers and air preheaters are typically used on large utility boilers that operate near capacity on a continuous basis. Air preheaters are not widely used for smaller industrial boilers as the resulting increases in combustion temperature may contribute to increased NO_X emissions. Typically, primary-service boilers of this size are equipped with either air preheaters or economizers, not both. Auxiliary boilers are not primary service boilers and would not necessarily use either device.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of air preheaters or economizers is a technically feasible option for the natural gas-fired auxiliary boiler at this source. However, since auxiliary boilers normally operate at a low firing rate and low heat output, use of an air preheater or an economizer will not be effective in improving thermal efficiency and should not be required for boilers in standby service such as the auxiliary boilers.

Turbulators for Firetube Boilers
Turbulators create turbulence within the firetubes to improve heat transfer characteristics. An array of baffles, blades, or coiled wires disturbs the laminar boundary layer within the firetubes, resulting in increased convective heat transfer. Turbulators are often considered a more economical alternative to economizers or air preheaters. Turbulators are typically installed on older firetube boilers operating with fewer tube passes than newer boilers given that multi-pass boilers utilize a greater heat transfer area and are inherently more efficient. Efficiency typically

increases by 1% for each 40 °F reduction in flue gas temperature. As the new boiler is a water tube boiler, the turbulators are not necessary or applicable.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Turbulators for Firetube Boilers is not a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Boiler Insulation
Significant heat losses can occur through the boiler shell. Proper insulation is used to minimize such losses. The refractory material lining inside the boiler is the primary insulating material, but properly applied insulation on the outer boiler surface can also reduce heat losses.

Insulation is categorized as either mass or reflective type, depending on whether it is intended to reduce conductive or radiative heat transmission, respectively. Radiation losses tend to increase with decreasing load and can be as high as 7% for small units or for larger units operating at reduced loads. The Thermal Insulation Manufacturers' Association provides guidance for determining the optimum insulation thickness for various applications.

Energy efficient refractory will be installed on the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of boiler insulation is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Minimization of Air Infiltration
Air infiltration occurs as a result of the large temperature difference between the hot combustion gases and the ambient air; the resulting pressure differential draws ambient air into the system through leak points such as warped doors or cracked casings/ductwork. Indications of excessive air leakage include elevated oxygen levels at the boiler outlet, elevated fuel consumption, and elevated gas temperatures.

The severity and source of the leaks determines whether the issue may be addressed as part of routine maintenance (e.g., door seal adjustments) or as part of planned outages (e.g., cracked casing repairs). Maintenance of boiler systems to minimize air leakage is a universally applicable approach.

The opportunity for improvement is a function of the leakage reduction and associated reduction in excess air. For example, a 3% change in oxygen levels in a gas-fired boiler represents efficiency improvements of approximately 4%. The expected efficiency improvements from reducing air leakage problems in industrial, commercial, and institutional boilers range from 1 to 4%. As part of the O&M practices, the air handling systems for each boiler will be periodically inspected for leaks.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Minimization of Air Infiltration is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Boiler Blowdown Heat Exchange
Waste heat from the boiler blowdown stream can be recovered with a heat exchanger, a flash tank, or flash tank in combination with a heat exchanger. The resulting low-pressure steam is most typically used in deaerators. Cooling the blowdown has the additional advantage of reducing the temperature of the liquids released into the sewer system.

Blowdown can be either intermittent bottom blowdown or continuous blowdown. Intermittent bottom blowdown may be sufficient if the feedwater is exceptionally pure. Intermittent blowdown is performed manually and therefore may result in wide fluctuations in blowdown patterns. Use of

continuous rather than intermittent blowdown saves treated boiler water and can result in significant energy savings.

High blowdown rates and boiler pressures are ideal conditions for blowdown recovery. Any boiler with continuous blowdown exceeding 5% of the steam rate exhibits significant potential for blowdown waste heat recovery. Manufacturers indicate that a 1% thermal efficiency can be achieved by this method. In certain cases, significant energy savings can be accomplished by recovering heat from boiler blowdown.

Expected efficiency improvements vary based on boiler blowdown rate and boiler pressure.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of boiler blowdown heat exchange is a technically feasible option for the natural gas-fired auxiliary boiler at this source. However, the effectiveness of this option is greatly reduced for stand-by (auxiliary) use boilers.

Condensation Return System
Hot condensate that is not returned to the boiler represents a corresponding loss of energy. Other benefits associated with an efficient condensate return system include reduced make-up water usage, water-related treatment costs, boiler blowdown, and disposal costs. Energy savings originate from the fact that most condensate is returned at relatively high temperatures (typically 130 to 225°F) compared to the cold makeup water (50 to 60°F) that must be heated, but must also account for the “steam flash loss” - the amount of saturated condensate that flashes off to steam when reduced to a lower pressure. Operation of the return condensate system depends on the specific boiler and water/condensate quality. Site-specific conditions and economic considerations must be addressed to determine whether it would be applicable, and therefore, it is necessary to consider its viability on a case-by-case basis.

A further improvement on recovering the available energy of the condensate may be to use a heat exchanger (vent condenser) where the flashing steam is typically vented. Site-specific evaluation is necessary before determining the viability of this approach.

Expected efficiency improvements vary based on condensate temperature and percent recovery. Condensate may be returned from some plant areas but not others due to water quality issues. The new boiler will be equipped with a condensate return system, but efficiency improvements may be minor.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of condensation return system is a technically feasible option for the natural gas-fired auxiliary boiler at this source. However, the effectiveness of condensate return systems on stand-by units (auxiliary boilers) and units receiving little condensate return would be negligible.

Minimization of Gas-side heat Transfer Surface Deposits
To minimize deposition on boiler heat transfer surfaces, the boiler must be operated within its design parameters. In practice, this may include the application of restrictions for fuel quality and firing rates. Boilers firing ash-laden fuels may be equipped with soot blowers to periodically remove the unavoidable deposition on the boiler walls and tubes and may utilize fuel treatment to mitigate the deposition propensity of the ash and combustion products.
Advanced soot blowing systems can be calibrated to activate automatically in response to feedback signals (e.g., exit gas temperature, heat transfer sensors) to optimize operations and effectiveness. The relationship between deposits and heat transfer deterioration varies with the type of fuel and ash characteristics. Efficiency gains are possible with coal- or other solid fuel-fired boilers.

Natural gas-fired boilers do not typically employ soot blowing systems given the reduced ash content of gaseous fuels. Since only natural gas will be fired, use of this technology would not be effective or appropriate.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of minimization of gas-side heat transfer surface deposits is not a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Steam Line Maintenance

Heat losses through uninsulated lines and fittings can be significant. For example, 250 ft of uninsulated, 4-inch line containing 300 psig steam would yield 2,800 MMBtu per year, the equivalent of about 0.3 to 1.2% heat loss for boiler sizes between 25 and 100 MMBtu per hour. Similarly, the penalties for leaky valves/traps can represent measurable losses. General experience suggests that steam systems that do not include steam trap maintenance over a period of 3 to 5 years can result in 15 to 30% steam trap failures. Leaking traps should account for less than 5% of the trap population at plants with regular inspection and maintenance programs for steam traps.

Energy audits and maintenance procedures should highlight common maintenance items such as uninsulated steam distribution and condensate return lines and other fittings. Ensuring that all steam/condensate lines are properly insulated will yield measurable efficiency gains. Common practice suggests that surfaces over 120°F (steam and condensate return piping, fittings) should be insulated. The source standard design practice is to insulate all piping (including steam lines) that exceed 140°F. Insulating jackets are available for valves, traps, flanges and other fittings. Leaky steam traps should be fixed as they represent another potentially significant source of wasted energy. Energy efficiency gains and cost depend on length and type of insulation required.

Steam and hot water lines will be insulated. As part of the O&M practices, the steam system components and insulation will be periodically inspected for leaks.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of stream line maintenance is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the technical feasibility analysis in Step 2, the remaining control technologies may be ranked as follows for controlling GHG emissions from the Auxiliary Boilers.

1. The boiler shall fire natural gas only. (0-42% CO_2 Reduction)
2. Boiler insulation; (7% CO_2 Reduction)
3. Efficient Burner design; (6% CO_2 Reduction)
4. Air Preheat or Economizers; (0-5% CO_2 Reduction)
5. Improved Combustion Measures: Optimization & Digital Control System; (0.5-5% CO_2 Reduction)
6. Minimization of Air infiltration; (1-4% CO_2 Reduction)
7. Improved Combustion Measures: Combustion Tuning; (3% CO_2 Reduction)

8. Operating and Maintenance (O&M) Practices;

9. Condensation Return System;

10. Steam line maintenance.

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed CO2e BACT determination along with the existing CO2e BACT determinations for similar plants. All data in the table is based on the information obtained from the permit application submitted by SABIC Innovative Plastics Mt. Vernon, LLC, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies. All limitations in parenthesis were not obtained from the RBLC but were calculated to provide a consistent basis for comparing emissions rates to the proposed project.

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating (MMBtu/hr)	Limitation	Control Method
Draft Permit No. 129-33998-00002 Proposed Limit	**SABIC Innovative Plastics Mt. Vernon, LLC *proposed***	**Proposed**	**Natural Gas-Fired Boiler (AUX BOILER)**	**249 MMBtu/hr**	**133,521 tons CO2e per rolling 12-month period**	**Firing natural gas only, Boiler insulation, Efficient Burner design, Air Preheat or Economizers, Improved Combustion Measures: Optimization & Digital Control System, Minimization of Air infiltration, Improved Combustion Measures: Combustion Tuning, Operating and Maintenance (O&M) Practices, Condensation Return System, Steam line maintenance, and thermal efficiency of 80%.**
Permit No. T147-32322-00062	Ohio Valley Resources, Rockport, IN	9/25/2013	Four NG Fired Boilers	218, each	CO2:59.61 tons/MMCF, combined fuel < 2,802 MMCF/yr	Natural gas fuel, Proper boiler design and good combustion practices, energy efficient design features; air inlet controls, heat recovery, condensate recovery and blowdown heat recovery & thermal efficiency of 80% (HHV)
Permit No. T141-31003-00579	St Joseph Energy Center, LLC New Carlisle, IN	12/23/2013	Two (2) natural gas fired auxiliary Boilers	80, each	81,996 tons per year combined	Good operation and maintenance practices; combustion tuning; oxygen trim controls and oxygen analyzers; equipped with economizer; energy efficient refractory;

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating (MMBtu/hr)	Limitation	Control Method
						condensate return system and hot lines; 80% thermal efficiency (HHV)
LA-0272	Dyno Nobel Louisiana Ammonia, LLC, Jefferson County, LA	3/27/2013	Commissioning Boilers 1 & 2 (CB-1 & CB-2)	217	55,986 tons per year	(P) Energy efficiency measure: economizers and insulation; improved combustion measures (i.e tuning , optimization, and instrumentation); and minimize air infiltration
NE-0054	Cargill, Inc, Washington County, NE	9/12/2013	Boiler K, Natural gas	300	CO2: 178 lbs/lb steam 153,743 tons/year	Good Combustion Practices
IA-0106	CF Industries Nitrogen , LLC - Port Neal Nitrogen Complex, Woodbury, IA	7/12/2013	Two NG Boilers	456	CO2: 117 lbs/MMBtu Methane;0.0023 lb/MMBtu; N2O: 0.0006 lb/MMBtu 234,168 tons per year	Proper operation and use of natural gas
LA-0266	Crosstex Processing Services, LLC - Eunice Gas Extraction Plant, Acadia, LA	5/1/2013	Natural Gas boiler	359	87.6 tons/mm lb steam	Energy efficiency: improved combustion measure (e.g, combustion tuning, optimization using parametric testing, advanced digital instrumentation such as temperature sensors, O2 monitors, CO trim control); economizer; insulation and minimized air infiltration.
IA-0105	Iowa Fertilizer Company, Lee County, IA	10/26/2012	Auxiliary Boiler	472.4	CO2: 117 lbs/MMBtu Methane;0.0023 lb/MMBtu; N2O: 0.0006 lb/MMBtu 51,748 tons per year	Good Combustion Practices
Permit No. T147-30464-00060	Indiana Gasification, LLC	6/27/2012	Auxiliary Boiler	172	CO2: 88,167 tons/year	Clean fuel (NG) efficient design, 81% thermal efficiency
CA-1212	Palmdale Hybrid Power Project, Los Angeles, CA	10/18/2011	Auxiliary Boiler	110	None	Annual Boiler tuneup

The use of natural gas fuel and a high thermal efficiency design are proposed for the boiler. The boiler will be designed to achieve a minimum 80% thermal efficiency (higher heating value, HHV).

Operation and maintenance according to the manufacturer's emission-related instructions or per a facility-developed maintenance plan (in a manner consistent with safety and good air pollution control practices for minimizing emissions) will prevent generation of additional GHG emissions due to efficiency losses over the lifetime of a piece of combustion equipment. An efficient burner design will be employed, taking into account the size, operating loads, and other site-specific conditions and objectives for the boiler. As part of the O&M practices, the air handling systems for the boilers will be periodically inspected for leaks and combustion tuning of the boiler will be conducted on an as-needed basis to address any decreases in boiler efficiency over time. The source will develop and implement specific O&M practices and perform boiler tune-ups for each boiler following the requirements of 40 CFR 63 Subpart DDDDD.

The proposed auxiliary boilers (AUX BOILER and AUX2 BOILER) are intended to be stand-by units that would not operate at maximum capacity for a significant number of hours except under unusual circumstances. As such, the use of an air preheater or an economizer would not be effective or economically feasible for these boilers, because there would be no measurable improvement in energy efficiency (or reduction in CO2e emissions), and this option should not be specified as a BACT requirement for the auxiliary boilers.

The effectiveness of a condensate return system for each boiler cannot be estimated at this time and is expected to be low since condensate from some plant areas will not be returned. In addition, condensate return systems would provide negligible benefit for stand-by (auxiliary) boilers. As such, the use of a condensate return system should not be specified as a BACT requirement for any of the boilers.

As mentioned in Step 2, the effectiveness of a blowdown heat exchanger for auxiliary boilers is expected to be negligible. Therefore, the use of a blowdown heat exchange is not specified as a BACT requirement for any of the boilers.

SABIC proposes the following as BACT for GHG emissions from the proposed auxiliary boiler:

1. The boiler shall fire natural gas only.

2. Operating and Maintenance (O&M) Practices;

3. Combustion Tuning;

4. Boiler will be equipped with efficient low NO_X burners;

5. Boiler will be equipped with digital control instrumentation, oxygen trim controls and oxygen analyzers;

6. Energy efficient refractory will be installed;

7. Air infiltration will be minimized; and

8. Insulation of steam and hot water lines will be maintained.

9. Total emissions from the auxiliary boiler (AUX BOILER) shall not exceed 133,521 tons of CO_2e per 12 consecutive month period with compliance determined on a monthly basis.

Step 5: Select BACT

Pursuant to 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD), IDEM has established the following as BACT for the GHG for the Natural Gas-Fired Auxiliary Boiler, identified as AUX BOILER:

1. The boiler shall fire natural gas only.

2. Boiler insulation;

3. Efficient Burner design;

4. Improved Combustion Measures: Optimization & Digital Control System;

5. Minimization of Air infiltration;

6. Improved Combustion Measures: Combustion Tuning;

7. Operating and Maintenance (O&M) Practices;

8. Steam line maintenance;

9. The Boiler shall achieve a minimum 80% thermal efficiency of (higher heating value, HHV); and

10. Total CO2e emissions from the auxiliary boiler (AUX BOILER) shall not exceed 133,521 tons of CO2e per 12 consecutive month period with compliance determined at the end of each month.

GHGs BACT – Natural Gas-Fired Auxiliary Boiler (AUX2 BOILER)

Step 1: Identify Potential Control Technologies

GHG emissions from combustion consist primarily of carbon dioxide (CO_2) and very low emissions of methane (CH_4) and nitrous oxide (N_2O). Using each compound's global warming potential (GWP), the emissions are converted to CO2e. Since over 90 percent (%) of GHG emissions in this process come from CO_2, only control technologies for CO_2 will be considered in this analysis. There are no known supplemental controls for N_2O or methane emissions from gas-fired units. Therefore, this BACT analysis focused on CO_2 as a surrogate for all GHG emissions.

1. Carbon Capture and Storage (CCS);

2. Fuel Selection;

3. High Thermal Efficiency Design (including efficient burner design);

4. Operating and Maintenance (O&M) Practices;

5. Improved Combustion Measures: Combustion Tuning;

6. Improved Combustion Measures: Optimization & Digital Control System;

7. Air Preheat & Economizers;

8. Turbulators for Firetube Boilers;

9. Boiler Insulation;

10. Minimization of Air Infiltration;

11. Boiler Blowdown Heat Exchange;

12. Condensation Return System;

13. Minimization of Gas-side heat Transfer Surface Deposits; and

14 Steam Line Maintenance.

Step 2: Eliminate Technically Infeasible Options

Carbon Capture and Sequestration (CCS)
Capture of CO_2 emissions from a natural gas-fired boiler would present serious technical problems similar to those discussed for gas turbines. CO_2 concentrations in gas-fired boiler exhausts are also lower than CO_2 concentrations for coal-fired units, and the quantity of dilute CO_2 available for capture is also much lower. None of the boilers have been tried for the Carbon Capture and Sequestration (CCS). There are no listings available in RBLC or State Permit.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a carbon capture and storage (CCS) is not a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Fuel Selection
Boilers are generally capable of burning various solid, liquid, or gaseous fuels. Natural gas has the lowest GHG emissions potential in terms of kg CO_2 per MMBtu of any available fuel. Further review of EPA's default CO_2 emission factors in Table C-1 in 40 CFR Part 98 indicates that the GHG emissions potential of natural gas is approximately 43 percent lower than bituminous coal in terms of kg CO_2 per MMBtu. As a "clean fuel", natural gas is proposed as the exclusive fuel type for the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of fuel selection is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Operating and Maintenance (O&M) Practices
Boiler efficiency decreases over time; however, the rate of deterioration can be curbed by proper O&M practices. A well operated and maintained plant will experience less deterioration of boiler efficiency. Deterioration results in higher heat rate, higher CO_2 emissions, and operating costs; in lower reliability; and in some cases, in reduced output. After a few years of neglect, it may reach the point where significant investment is required to rehabilitate the plant and bring it as close as possible to the design performance.

Rehabilitation may focus on life extension and reliability improvement of the plant or may include additional measures that improve plant efficiency, occasionally above the original design efficiency. The efficiency can be improved by retrofitting combustion control technologies such as heat recovery systems, control technology, and upgraded burners.

Additional GHG reductions can be achieved through energy improvements in the steam/hot water distribution system, the boiler auxiliaries, or in process efficiency improvements. Operation and maintenance according to the manufacturer's emission-related instructions or per a facility-developed maintenance plan (in a manner consistent with safety and good air pollution control practices for minimizing emissions) will prevent generation of additional GHG emissions due to efficiency losses over the lifetime of each piece of combustion equipment.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Operating and Maintenance (O&M) practices is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Efficient Burner Design
New efficient burner designs for all types of boilers and fuels are commercially available to help minimize fuel combustion and GHG emissions. Burners with single and multiple fuel capability, low- and ultra-low-NO_X models, and sizes ranging from very small to very large are widely deployed in industry. Further, the burner size and turndown capability (i.e., ability to operate and/or efficiency of operation at less than full load) are also key aspects of burner design as they will impact the losses associated with inefficient low load and on/off cycling duty. A higher turndown ratio reduces burner startups, provides better load control, saves wear-and-tear on the burner, and reduces purge-air requirements, all resulting in better overall efficiency. Therefore, site-specific conditions and objectives may favor one model over the other. A reduction in CO_2 emissions of up to 6% is possible. The source will install an efficient low-NO_X natural gas burner on the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of efficient burner designs is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Improved Combustion Measures: Combustion Tuning
Tuning of the combustion system requires a visual check by an experienced boiler engineer to ensure that everything is in good working condition and set according to the manufacturer's recommendations or the optimum settings developed for the particular boiler. Simple parametric testing may be required, which may involve changes in the key control variables of the combustion system and observation of key parameters such as CO emissions, steam outlet conditions, flue gas outlet (stack) temperature, and NO_X emissions. Up to a 3% reduction in CO_2 emissions is possible.

As part of the O&M practices, combustion tuning of the new boiler will be conducted on an as-needed basis to address any decreases in boiler efficiency over time.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Improved Combustion Measures: Combustion Tuning is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Improved Combustion Measures: Optimization & Digital Control System
Optimization can be accomplished through parametric testing, analysis of the results, parameter estimation, periodic testing, and/or manual tuning. Software-based optimization systems may be cost-effective for large boilers.

Digital control systems are generally necessary to achieve the greatest improvement in performance through tuning and optimization. Temperature sensors, oxygen monitors, oxygen trim controls, and other instrumentation may be required to maximize boiler efficiency.

The addition of optimization systems, modern control systems, and instrumentation has resulted in efficiency improvements of 0.5 to 5%.

The new boiler will be equipped with oxygen trim controls and oxygen analyzers.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Improved Combustion Measures: Optimization & Digital Control System is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Air Preheat & Economizers
Energy efficiency can be increased by using waste heat gas recovery systems to capture and utilize heat in the flue gas. The most commonly used waste heat recovery methods are preheating combustion air and water heating via economizer. Economizers and air preheaters often occupy a substantial physical footprint.

There are two general types of air preheaters: recuperators and regenerators. Recuperators are gas-to-gas heat exchangers usually placed on the boiler stack. Internal tubes or plates transfer heat from the outgoing exhaust to the incoming combustion air. Regenerators include two or more separate heat storage sections. The hot flue gas heats the heating plates which, in turn, heat the incoming combustion air. General benefits include improved efficiency and faster startup. Efficiency typically increases by 1% for each 40°F reduction in flue gas temperature.

In an economizer, tubular heat transfer surfaces preheat the boiler feedwater before it enters the steam drum or furnace surfaces. Economizers also reduce the potential of thermal shock and strong water temperature fluctuations as the feedwater enters the drum or waterwalls.

Economizers are typically installed on larger units. Air preheaters typically increase efficiency by 1% for each 40°F reduction in flue gas temperature. Economizers typically operate at a thermal efficiency of 5%.

Economizers and air preheaters are typically used on large utility boilers that operate near capacity on a continuous basis. Air preheaters are not widely used for smaller industrial boilers as the resulting increases in combustion temperature may contribute to increased NO_X emissions. Typically, primary-service boilers of this size are equipped with either air preheaters or economizers, not both. Auxiliary boilers are not primary service boilers and would not necessarily use either device.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of air preheaters or economizers is a technically feasible option for the natural gas-fired auxiliary boiler at this source. However, since auxiliary boilers normally operate at a low firing rate and low heat output, use of an air preheater or an economizer will not be effective in improving thermal efficiency and should not be required for boilers in standby service such as the auxiliary boilers.

Turbulators for Firetube Boilers
Turbulators create turbulence within the firetubes to improve heat transfer characteristics. An array of baffles, blades, or coiled wires disturbs the laminar boundary layer within the firetubes, resulting in increased convective heat transfer. Turbulators are often considered a more economical alternative to economizers or air preheaters. Turbulators are typically installed on older firetube boilers operating with fewer tube passes than newer boilers given that multi-pass boilers utilize a greater heat transfer area and are inherently more efficient. Efficiency typically increases by 1% for each 40 °F reduction in flue gas temperature. As the new boiler is a water tube boiler, the turbulators are not necessary or applicable.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Turbulators for Firetube Boilers is not a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Boiler Insulation
Significant heat losses can occur through the boiler shell. Proper insulation is used to minimize such losses. The refractory material lining inside the boiler is the primary insulating material, but properly applied insulation on the outer boiler surface can also reduce heat losses.

Insulation is categorized as either mass or reflective type, depending on whether it is intended to reduce conductive or radiative heat transmission, respectively. Radiation losses tend to increase

with decreasing load and can be as high as 7% for small units or for larger units operating at reduced loads. The Thermal Insulation Manufacturers' Association provides guidance for determining the optimum insulation thickness for various applications.

Energy efficient refractory will be installed on the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of boiler insulation is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Minimization of Air Infiltration
Air infiltration occurs as a result of the large temperature difference between the hot combustion gases and the ambient air; the resulting pressure differential draws ambient air into the system through leak points such as warped doors or cracked casings/ductwork. Indications of excessive air leakage include elevated oxygen levels at the boiler outlet, elevated fuel consumption, and elevated gas temperatures.

The severity and source of the leaks determines whether the issue may be addressed as part of routine maintenance (e.g., door seal adjustments) or as part of planned outages (e.g., cracked casing repairs). Maintenance of boiler systems to minimize air leakage is a universally applicable approach.

The opportunity for improvement is a function of the leakage reduction and associated reduction in excess air. For example, a 3% change in oxygen levels in a gas-fired boiler represents efficiency improvements of approximately 4%. The expected efficiency improvements from reducing air leakage problems in industrial, commercial, and institutional boilers range from 1 to 4%. As part of the O&M practices, the air handling systems for each boiler will be periodically inspected for leaks.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Minimization of Air Infiltration is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Boiler Blowdown Heat Exchange
Waste heat from the boiler blowdown stream can be recovered with a heat exchanger, a flash tank, or flash tank in combination with a heat exchanger. The resulting low-pressure steam is most typically used in deaerators. Cooling the blowdown has the additional advantage of reducing the temperature of the liquids released into the sewer system.

Blowdown can be either intermittent bottom blowdown or continuous blowdown. Intermittent bottom blowdown may be sufficient if the feedwater is exceptionally pure. Intermittent blowdown is performed manually and therefore may result in wide fluctuations in blowdown patterns. Use of continuous rather than intermittent blowdown saves treated boiler water and can result in significant energy savings.

High blowdown rates and boiler pressures are ideal conditions for blowdown recovery. Any boiler with continuous blowdown exceeding 5% of the steam rate exhibits significant potential for blowdown waste heat recovery. Manufacturers indicate that a 1% thermal efficiency can be achieved by this method. In certain cases, significant energy savings can be accomplished by recovering heat from boiler blowdown.

Expected efficiency improvements vary based on boiler blowdown rate and boiler pressure.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of boiler blowdown heat exchange is a technically feasible option for the natural gas-fired

auxiliary boiler at this source. However, the effectiveness of this option is greatly reduced for stand-by (auxiliary) use boilers.

Condensation Return System
Hot condensate that is not returned to the boiler represents a corresponding loss of energy. Other benefits associated with an efficient condensate return system include reduced make-up water usage, water-related treatment costs, boiler blowdown, and disposal costs. Energy savings originate from the fact that most condensate is returned at relatively high temperatures (typically 130 to 225°F) compared to the cold makeup water (50 to 60°F) that must be heated, but must also account for the “steam flash loss” - the amount of saturated condensate that flashes off to steam when reduced to a lower pressure. Operation of the return condensate system depends on the specific boiler and water/condensate quality. Site-specific conditions and economic considerations must be addressed to determine whether it would be applicable, and therefore, it is necessary to consider its viability on a case-by-case basis.

A further improvement on recovering the available energy of the condensate may be to use a heat exchanger (vent condenser) where the flashing steam is typically vented. Site-specific evaluation is necessary before determining the viability of this approach.

Expected efficiency improvements vary based on condensate temperature and percent recovery. Condensate may be returned from some plant areas but not others due to water quality issues. The new boiler will be equipped with a condensate return system, but efficiency improvements may be minor.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of condensation return system is a technically feasible option for the natural gas-fired auxiliary boiler at this source. However, the effectiveness of condensate return systems on stand-by units (auxiliary boilers) and units receiving little condensate return would be negligible.

Minimization of Gas-side heat Transfer Surface Deposits
To minimize deposition on boiler heat transfer surfaces, the boiler must be operated within its design parameters. In practice, this may include the application of restrictions for fuel quality and firing rates. Boilers firing ash-laden fuels may be equipped with soot blowers to periodically remove the unavoidable deposition on the boiler walls and tubes and may utilize fuel treatment to mitigate the deposition propensity of the ash and combustion products.
Advanced soot blowing systems can be calibrated to activate automatically in response to feedback signals (e.g., exit gas temperature, heat transfer sensors) to optimize operations and effectiveness. The relationship between deposits and heat transfer deterioration varies with the type of fuel and ash characteristics. Efficiency gains are possible with coal- or other solid fuel-fired boilers.

Natural gas-fired boilers do not typically employ soot blowing systems given the reduced ash content of gaseous fuels. Since only natural gas will be fired, use of this technology would not be effective or appropriate.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of minimization of gas-side heat transfer surface deposits is not a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Steam Line Maintenance
Heat losses through uninsulated lines and fittings can be significant. For example, 250 ft of uninsulated, 4-inch line containing 300 psig steam would yield 2,800 MMBtu per year, the equivalent of about 0.3 to 1.2% heat loss for boiler sizes between 25 and 100 MMBtu per hour. Similarly, the penalties for leaky valves/traps can represent measurable losses. General experience suggests that steam systems that do not include steam trap maintenance over a

period of 3 to 5 years can result in 15 to 30% steam trap failures. Leaking traps should account for less than 5% of the trap population at plants with regular inspection and maintenance programs for steam traps.

Energy audits and maintenance procedures should highlight common maintenance items such as uninsulated steam distribution and condensate return lines and other fittings. Ensuring that all steam/condensate lines are properly insulated will yield measurable efficiency gains. Common practice suggests that surfaces over 120°F (steam and condensate return piping, fittings) should be insulated. The source standard design practice is to insulate all piping (including steam lines) that exceed 140°F. Insulating jackets are available for valves, traps, flanges and other fittings. Leaky steam traps should be fixed as they represent another potentially significant source of wasted energy. Energy efficiency gains and cost depend on length and type of insulation required.

Steam and hot water lines will be insulated. As part of the O&M practices, the steam system components and insulation will be periodically inspected for leaks.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of stream line maintenance is a technically feasible option for the natural gas-fired auxiliary boiler at this source.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the technical feasibility analysis in Step 2, the remaining control technologies may be ranked as follows for controlling GHG emissions from the Auxiliary Boilers.

1. The boiler shall fire natural gas only. (0-42% CO_2 Reduction)
2. Boiler insulation; (7% CO_2 Reduction)
3. Efficient Burner design; (6% CO_2 Reduction)
4. Air Preheat or Economizers; (0-5% CO_2 Reduction)
5. Improved Combustion Measures: Optimization & Digital Control System; (0.5-5% CO_2 Reduction)
6. Minimization of Air infiltration; (1-4% CO_2 Reduction)
7. Improved Combustion Measures: Combustion Tuning; (3% CO_2 Reduction)
8. Operating and Maintenance (O&M) Practices;
9. Condensation Return System;
10. Steam line maintenance.

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed CO2e BACT determination along with the existing CO2e BACT determinations for similar plants. All data in the table is based on the information obtained from the permit application submitted by SABIC Innovative Plastics Mt. Vernon, LLC, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies. All limitations in parenthesis were not obtained from the RBLC but were calculated to provide a consistent basis for comparing emissions rates to the

proposed project.

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating (MMBtu/hr)	Limitation	Control Method
Draft Permit No. 129-33998-00002 Proposed Limit	**SABIC Innovative Plastics Mt. Vernon, LLC *proposed***	**Proposed**	**Natural Gas-Fired Boiler (AUX BOILER)**	**249 MMBtu/hr**	**133,521 tons CO2e per rolling 12-month period**	**Firing natural gas only, Boiler insulation, Efficient Burner design, Air Preheat or Economizers, Improved Combustion Measures: Optimization & Digital Control System, Minimization of Air infiltration, Improved Combustion Measures: Combustion Tuning, Operating and Maintenance (O&M) Practices, Condensation Return System, Steam line maintenance, and thermal efficiency of 80%.**
Permit No. T147-32322-00062	Ohio Valley Resources, Rockport, IN	9/25/2013	Four NG Fired Boilers	218, each	CO2:59.61 tons/MMCF, combined fuel < 2,802 MMCF/yr	Natural gas fuel, Proper boiler design and good combustion practices, energy efficient design features; air inlet controls, heat recovery, condensate recovery and blowdown heat recovery & thermal efficiency of 80% (HHV)
Permit No. T141-31003-00579	St Joseph Energy Center, LLC New Carlisle, IN	12/23/2013	Two (2) natural gas fired auxiliary Boilers	80, each	81,996 tons per year combined	Good operation and maintenance practices; combustion tuning; oxygen trim controls and oxygen analyzers; equipped with economizer; energy efficient refractory; condensate return system and hot lines; 80% thermal efficiency (HHV)
LA-0272	Dyno Nobel Louisiana Ammonia, LLC, Jefferson County, LA	3/27/2013	Commissioning Boilers 1 & 2 (CB-1 & CB-2)	217	55,986 tons per year	(P) Energy efficiency measure: economizers and insulation; improved combustion measures (i.e tuning , optimization, and instrumentation); and minimize air infiltration
NE-0054	Cargill, Inc, Washington County, NE	9/12/2013	Boiler K, Natural gas	300	CO2: 178 lbs/lb steam 153,743 tons/year	Good Combustion Practices

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating (MMBtu/hr)	Limitation	Control Method
IA-0106	CF Industries Nitrogen , LLC - Port Neal Nitrogen Complex, Woodbury, IA	7/12/2013	Two NG Boilers	456	CO2: 117 lbs/MMBtu Methane;0.0023 lb/MMBtu; N2O: 0.0006 lb/MMBtu 234,168 tons per year	Proper operation and use of natural gas
LA-0266	Crosstex Processing Services, LLC - Eunice Gas Extraction Plant, Acadia, LA	5/1/2013	Natural Gas boiler	359	87.6 tons/mm lb steam	Energy efficiency: improved combustion measure (e.g, combustion tuning, optimization using parametric testing, advanced digital instrumentation such as temperature sensors, O2 monitors, CO trim control); economizer; insulation and minimized air infiltration.
IA-0105	Iowa Fertilizer Company, Lee County, IA	10/26/2012	Auxiliary Boiler	472.4	CO2: 117 lbs/MMBtu Methane;0.0023 lb/MMBtu; N2O: 0.0006 lb/MMBtu 51,748 tons per year	Good Combustion Practices
Permit No. T147-30464-00060	Indiana Gasification, LLC	6/27/2012	Auxiliary Boiler	172	CO2: 88,167 tons/year	Clean fuel (NG) efficient design, 81% thermal efficiency
CA-1212	Palmdale Hybrid Power Project, Los Angeles, CA	10/18/2011	Auxiliary Boiler	110	None	Annual Boiler tuneup

The use of natural gas fuel and a high thermal efficiency design are proposed for the boiler. The boiler will be designed to achieve a minimum 80% thermal efficiency (higher heating value, HHV).

Operation and maintenance according to the manufacturer's emission-related instructions or per a facility-developed maintenance plan (in a manner consistent with safety and good air pollution control practices for minimizing emissions) will prevent generation of additional GHG emissions due to efficiency losses over the lifetime of a piece of combustion equipment. An efficient burner design will be employed, taking into account the size, operating loads, and other site-specific conditions and objectives for the boiler. As part of the O&M practices, the air handling systems for the boilers will be periodically inspected for leaks and combustion tuning of the boiler will be conducted on an as-needed basis to address any decreases in boiler efficiency over time. The source will develop and implement specific O&M practices and perform boiler tune-ups for each boiler following the requirements of 40 CFR 63 Subpart DDDDD.

The proposed auxiliary boilers (AUX BOILER and AUX2 BOILER) are intended to be stand-by units that would not operate at maximum capacity for a significant number of hours except under unusual

circumstances. As such, the use of an air preheater or an economizer would not be effective or economically feasible for these boilers, because there would be no measurable improvement in energy efficiency (or reduction in CO2e emissions), and this option should not be specified as a BACT requirement for the auxiliary boilers.

The effectiveness of a condensate return system for each boiler cannot be estimated at this time and is expected to be low since condensate from some plant areas will not be returned. In addition, condensate return systems would provide negligible benefit for stand-by (auxiliary) boilers. As such, the use of a condensate return system should not be specified as a BACT requirement for any of the boilers.

As mentioned in Step 2, the effectiveness of a blowdown heat exchanger for auxiliary boilers is expected to be negligible. Therefore, the use of a blowdown heat exchange is not specified as a BACT requirement for any of the boilers.

SABIC proposes the following as BACT for GHG emissions from the proposed auxiliary boiler:

1. The boiler shall fire natural gas only.

2. Operating and Maintenance (O&M) Practices;

3. Combustion Tuning;

4. Boiler will be equipped with efficient low NO_X burners;

5. Boiler will be equipped with digital control instrumentation, oxygen trim controls and oxygen analyzers;

6. Energy efficient refractory will be installed;

7. Air infiltration will be minimized; and

8. Insulation of steam and hot water lines will be maintained.

9. Total emissions from the auxiliary boiler (PB) shall not exceed 133,521 tons of CO_2e per 12 consecutive month period with compliance determined on a monthly basis.

Step 5: Select BACT

Pursuant to 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD), IDEM has established the following as BACT for the GHG for the Natural Gas-Fired Auxiliary Boiler, identified as AUX2 BOILER:

1. The boiler shall fire natural gas only.

2. Boiler insulation;

3. Efficient Burner design;

4. Improved Combustion Measures: Optimization & Digital Control System;

5. Minimization of Air infiltration;

6. Improved Combustion Measures: Combustion Tuning;

7. Operating and Maintenance (O&M) Practices;

8. Steam line maintenance;

9. The Boiler shall achieve a minimum 80% thermal efficiency of (higher heating value, HHV); and

10. Total CO2e emissions from the auxiliary boiler (AUX2 BOILER) shall not exceed 133,521 tons of CO2e per 12 consecutive month period with compliance determined at the end of each month.

GHGs BACT – Natural Gas-Fired Boiler (CG1 BOILER)

Step 1: Identify Potential Control Technologies

GHG emissions from combustion consist primarily of carbon dioxide (CO_2) and very low emissions of methane (CH_4) and nitrous oxide (N_2O). Using each compound's global warming potential (GWP), the emissions are converted to CO2e. Since over 90 percent (%) of GHG emissions in this process come from CO_2, only control technologies for CO_2 will be considered in this analysis. There are no known supplemental controls for N_2O or methane emissions from gas-fired units. Therefore, this BACT analysis focused on CO_2 as a surrogate for all GHG emissions.

1. Carbon Capture and Storage (CCS);

2. Fuel Selection;

3. High Thermal Efficiency Design (including efficient burner design);

4. Operating and Maintenance (O&M) Practices;

5. Improved Combustion Measures: Combustion Tuning;

6. Improved Combustion Measures: Optimization & Digital Control System;

7. Air Preheat & Economizers;

8. Turbulators for Firetube Boilers;

9. Boiler Insulation;

10. Minimization of Air Infiltration;

11. Boiler Blowdown Heat Exchange;

12. Condensation Return System;

13. Minimization of Gas-side heat Transfer Surface Deposits; and

14 Steam Line Maintenance.

Step 2: Eliminate Technically Infeasible Options

Carbon Capture and Sequestration (CCS)
Capture of CO_2 emissions from a natural gas-fired boiler would present serious technical problems similar to those discussed for gas turbines. CO_2 concentrations in gas-fired boiler exhausts are also lower than CO_2 concentrations for coal-fired units, and the quantity of dilute

CO_2 available for capture is also much lower. None of the boilers have been tried for the Carbon Capture and Sequestration (CCS). There are no listings available in RBLC or State Permit.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a carbon capture and storage (CCS) is not a technically feasible option for the natural gas-fired boiler at this source.

Fuel Selection
Boilers are generally capable of burning various solid, liquid, or gaseous fuels. Natural gas has the lowest GHG emissions potential in terms of kg CO_2 per MMBtu of any available fuel. Further review of EPA's default CO_2 emission factors in Table C-1 in 40 CFR Part 98 indicates that the GHG emissions potential of natural gas is approximately 43 percent lower than bituminous coal in terms of kg CO_2 per MMBtu. As a "clean fuel", natural gas is proposed as the exclusive fuel type for the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of fuel selection is a technically feasible option for the natural gas-fired boiler at this source.

Operating and Maintenance (O&M) Practices
Boiler efficiency decreases over time; however, the rate of deterioration can be curbed by proper O&M practices. A well operated and maintained plant will experience less deterioration of boiler efficiency. Deterioration results in higher heat rate, higher CO_2 emissions, and operating costs; in lower reliability; and in some cases, in reduced output. After a few years of neglect, it may reach the point where significant investment is required to rehabilitate the plant and bring it as close as possible to the design performance.

Rehabilitation may focus on life extension and reliability improvement of the plant or may include additional measures that improve plant efficiency, occasionally above the original design efficiency. The efficiency can be improved by retrofitting combustion control technologies such as heat recovery systems, control technology, and upgraded burners.

Additional GHG reductions can be achieved through energy improvements in the steam/hot water distribution system, the boiler auxiliaries, or in process efficiency improvements. Operation and maintenance according to the manufacturer's emission-related instructions or per a facility-developed maintenance plan (in a manner consistent with safety and good air pollution control practices for minimizing emissions) will prevent generation of additional GHG emissions due to efficiency losses over the lifetime of each piece of combustion equipment.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Operating and Maintenance (O&M) practices is a technically feasible option for the natural gas-fired boiler at this source.

Efficient Burner Design
New efficient burner designs for all types of boilers and fuels are commercially available to help minimize fuel combustion and GHG emissions. Burners with single and multiple fuel capability, low- and ultra-low-NO_X models, and sizes ranging from very small to very large are widely deployed in industry. Further, the burner size and turndown capability (i.e., ability to operate and/or efficiency of operation at less than full load) are also key aspects of burner design as they will impact the losses associated with inefficient low load and on/off cycling duty. A higher turndown ratio reduces burner startups, provides better load control, saves wear-and-tear on the burner, and reduces purge-air requirements, all resulting in better overall efficiency. Therefore, site-specific conditions and objectives may favor one model over the other. A reduction in CO_2 emissions of up to 6% is possible. The source will install an efficient low-NO_X natural gas burner on the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of efficient burner designs is a technically feasible option for the natural gas-fired boiler at this source.

Improved Combustion Measures: Combustion Tuning
Tuning of the combustion system requires a visual check by an experienced boiler engineer to ensure that everything is in good working condition and set according to the manufacturer's recommendations or the optimum settings developed for the particular boiler. Simple parametric testing may be required, which may involve changes in the key control variables of the combustion system and observation of key parameters such as CO emissions, steam outlet conditions, flue gas outlet (stack) temperature, and NO_X emissions. Up to a 3% reduction in CO_2 emissions is possible.

As part of the O&M practices, combustion tuning of the new boiler will be conducted on an as-needed basis to address any decreases in boiler efficiency over time.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Improved Combustion Measures: Combustion Tuning is a technically feasible option for the natural gas-fired boiler at this source.

Improved Combustion Measures: Optimization & Digital Control System
Optimization can be accomplished through parametric testing, analysis of the results, parameter estimation, periodic testing, and/or manual tuning. Software-based optimization systems may be cost-effective for large boilers.

Digital control systems are generally necessary to achieve the greatest improvement in performance through tuning and optimization. Temperature sensors, oxygen monitors, oxygen trim controls, and other instrumentation may be required to maximize boiler efficiency.

The addition of optimization systems, modern control systems, and instrumentation has resulted in efficiency improvements of 0.5 to 5%.

The new boiler will be equipped with oxygen trim controls and oxygen analyzers.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Improved Combustion Measures: Optimization & Digital Control System is a technically feasible option for the natural gas-fired boiler at this source.

Air Preheat & Economizers
Energy efficiency can be increased by using waste heat gas recovery systems to capture and utilize heat in the flue gas. The most commonly used waste heat recovery methods are preheating combustion air and water heating via economizer. Economizers and air preheaters often occupy a substantial physical footprint.

There are two general types of air preheaters: recuperators and regenerators. Recuperators are gas-to-gas heat exchangers usually placed on the boiler stack. Internal tubes or plates transfer heat from the outgoing exhaust to the incoming combustion air. Regenerators include two or more separate heat storage sections. The hot flue gas heats the heating plates which, in turn, heat the incoming combustion air. General benefits include improved efficiency and faster startup. Efficiency typically increases by 1% for each 40°F reduction in flue gas temperature.

In an economizer, tubular heat transfer surfaces preheat the boiler feedwater before it enters the steam drum or furnace surfaces. Economizers also reduce the potential of thermal shock and strong water temperature fluctuations as the feedwater enters the drum or waterwalls.

Economizers are typically installed on larger units. Air preheaters typically increase efficiency by 1% for each 40°F reduction in flue gas temperature. Economizers typically operate at a thermal efficiency of 5%.

Economizers and air preheaters are typically used on large utility boilers that operate near capacity on a continuous basis. Air preheaters are not widely used for smaller industrial boilers as the resulting increases in combustion temperature may contribute to increased NO_X emissions. Typically, primary-service boilers of this size are equipped with either air preheaters or economizers, not both. Auxiliary boilers are not primary service boilers and would not necessarily use either device.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of air preheaters or economizers is a technically feasible option for the natural gas-fired auxiliary boiler at this source. However, since auxiliary boilers normally operate at a low firing rate and low heat output, use of an air preheater or an economizer will not be effective in improving thermal efficiency and should not be required for boilers in standby service such as the boilers.

Turbulators for Firetube Boilers
Turbulators create turbulence within the firetubes to improve heat transfer characteristics. An array of baffles, blades, or coiled wires disturbs the laminar boundary layer within the firetubes, resulting in increased convective heat transfer. Turbulators are often considered a more economical alternative to economizers or air preheaters. Turbulators are typically installed on older firetube boilers operating with fewer tube passes than newer boilers given that multi-pass boilers utilize a greater heat transfer area and are inherently more efficient. Efficiency typically increases by 1% for each 40 °F reduction in flue gas temperature. As the new boiler is a water tube boiler, the turbulators are not necessary or applicable.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Turbulators for Firetube Boilers is not a technically feasible option for the natural gas-fired boiler at this source.

Boiler Insulation
Significant heat losses can occur through the boiler shell. Proper insulation is used to minimize such losses. The refractory material lining inside the boiler is the primary insulating material, but properly applied insulation on the outer boiler surface can also reduce heat losses.

Insulation is categorized as either mass or reflective type, depending on whether it is intended to reduce conductive or radiative heat transmission, respectively. Radiation losses tend to increase with decreasing load and can be as high as 7% for small units or for larger units operating at reduced loads. The Thermal Insulation Manufacturers' Association provides guidance for determining the optimum insulation thickness for various applications.

Energy efficient refractory will be installed on the new boiler.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of boiler insulation is a technically feasible option for the natural gas-fired boiler at this source.

Minimization of Air Infiltration
Air infiltration occurs as a result of the large temperature difference between the hot combustion gases and the ambient air; the resulting pressure differential draws ambient air into the system through leak points such as warped doors or cracked casings/ductwork. Indications of excessive air leakage include elevated oxygen levels at the boiler outlet, elevated fuel consumption, and elevated gas temperatures.

The severity and source of the leaks determines whether the issue may be addressed as part of routine maintenance (e.g., door seal adjustments) or as part of planned outages (e.g., cracked casing repairs). Maintenance of boiler systems to minimize air leakage is a universally applicable approach.
The opportunity for improvement is a function of the leakage reduction and associated reduction in excess air. For example, a 3% change in oxygen levels in a gas-fired boiler represents efficiency improvements of approximately 4%. The expected efficiency improvements from reducing air leakage problems in industrial, commercial, and institutional boilers range from 1 to 4%. As part of the O&M practices, the air handling systems for each boiler will be periodically inspected for leaks.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Minimization of Air Infiltration is a technically feasible option for the natural gas-fired boiler at this source.

Boiler Blowdown Heat Exchange
Waste heat from the boiler blowdown stream can be recovered with a heat exchanger, a flash tank, or flash tank in combination with a heat exchanger. The resulting low-pressure steam is most typically used in deaerators. Cooling the blowdown has the additional advantage of reducing the temperature of the liquids released into the sewer system.

Blowdown can be either intermittent bottom blowdown or continuous blowdown. Intermittent bottom blowdown may be sufficient if the feedwater is exceptionally pure. Intermittent blowdown is performed manually and therefore may result in wide fluctuations in blowdown patterns. Use of continuous rather than intermittent blowdown saves treated boiler water and can result in significant energy savings.

High blowdown rates and boiler pressures are ideal conditions for blowdown recovery. Any boiler with continuous blowdown exceeding 5% of the steam rate exhibits significant potential for blowdown waste heat recovery. Manufacturers indicate that a 1% thermal efficiency can be achieved by this method. In certain cases, significant energy savings can be accomplished by recovering heat from boiler blowdown.

Expected efficiency improvements vary based on boiler blowdown rate and boiler pressure.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of boiler blowdown heat exchange is a technically feasible option for the natural gas-fired boiler at this source. However, the effectiveness of this option is greatly reduced for stand-by (auxiliary) use boilers.

Condensation Return System
Hot condensate that is not returned to the boiler represents a corresponding loss of energy. Other benefits associated with an efficient condensate return system include reduced make-up water usage, water-related treatment costs, boiler blowdown, and disposal costs. Energy savings originate from the fact that most condensate is returned at relatively high temperatures (typically 130 to 225°F) compared to the cold makeup water (50 to 60°F) that must be heated, but must also account for the “steam flash loss” - the amount of saturated condensate that flashes off to steam when reduced to a lower pressure. Operation of the return condensate system depends on the specific boiler and water/condensate quality. Site-specific conditions and economic considerations must be addressed to determine whether it would be applicable, and therefore, it is necessary to consider its viability on a case-by-case basis.

A further improvement on recovering the available energy of the condensate may be to use a heat exchanger (vent condenser) where the flashing steam is typically vented. Site-specific evaluation is necessary before determining the viability of this approach.

Expected efficiency improvements vary based on condensate temperature and percent recovery. Condensate may be returned from some plant areas but not others due to water quality issues. The new boiler will be equipped with a condensate return system, but efficiency improvements may be minor.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of condensation return system is a technically feasible option for the natural gas-fired boiler at this source. However, the effectiveness of condensate return systems on stand-by units (auxiliary boilers) and units receiving little condensate return would be negligible.

Minimization of Gas-side heat Transfer Surface Deposits

To minimize deposition on boiler heat transfer surfaces, the boiler must be operated within its design parameters. In practice, this may include the application of restrictions for fuel quality and firing rates. Boilers firing ash-laden fuels may be equipped with soot blowers to periodically remove the unavoidable deposition on the boiler walls and tubes and may utilize fuel treatment to mitigate the deposition propensity of the ash and combustion products.
Advanced soot blowing systems can be calibrated to activate automatically in response to feedback signals (e.g., exit gas temperature, heat transfer sensors) to optimize operations and effectiveness. The relationship between deposits and heat transfer deterioration varies with the type of fuel and ash characteristics. Efficiency gains are possible with coal- or other solid fuel-fired boilers.

Natural gas-fired boilers do not typically employ soot blowing systems given the reduced ash content of gaseous fuels. Since only natural gas will be fired, use of this technology would not be effective or appropriate.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of minimization of gas-side heat transfer surface deposits is not a technically feasible option for the natural gas-fired boiler at this source.

Steam Line Maintenance

Heat losses through uninsulated lines and fittings can be significant. For example, 250 ft of uninsulated, 4-inch line containing 300 psig steam would yield 2,800 MMBtu per year, the equivalent of about 0.3 to 1.2% heat loss for boiler sizes between 25 and 100 MMBtu per hour. Similarly, the penalties for leaky valves/traps can represent measurable losses. General experience suggests that steam systems that do not include steam trap maintenance over a period of 3 to 5 years can result in 15 to 30% steam trap failures. Leaking traps should account for less than 5% of the trap population at plants with regular inspection and maintenance programs for steam traps.

Energy audits and maintenance procedures should highlight common maintenance items such as uninsulated steam distribution and condensate return lines and other fittings. Ensuring that all steam/condensate lines are properly insulated will yield measurable efficiency gains. Common practice suggests that surfaces over 120°F (steam and condensate return piping, fittings) should be insulated. The source standard design practice is to insulate all piping (including steam lines) that exceed 140°F. Insulating jackets are available for valves, traps, flanges and other fittings. Leaky steam traps should be fixed as they represent another potentially significant source of wasted energy. Energy efficiency gains and cost depend on length and type of insulation required.

Steam and hot water lines will be insulated. As part of the O&M practices, the steam system components and insulation will be periodically inspected for leaks.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of stream line maintenance is a technically feasible option for the natural gas-fired boiler at this source.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the technical feasibility analysis in Step 2, the remaining control technologies may be ranked as follows for controlling GHG emissions from the Auxiliary Boilers.

1. The boiler shall fire natural gas only. (0-42% CO_2 Reduction)
2. Boiler insulation; (7% CO_2 Reduction)
3. Efficient Burner design; (6% CO_2 Reduction)
4. Air Preheat or Economizers; (0-5% CO_2 Reduction)
5. Improved Combustion Measures: Optimization & Digital Control System; (0.5-5% CO_2 Reduction)
6. Minimization of Air infiltration; (1-4% CO_2 Reduction)
7. Improved Combustion Measures: Combustion Tuning; (3% CO_2 Reduction)
8. Operating and Maintenance (O&M) Practices;
9. Condensation Return System;
10. Steam line maintenance.

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed CO2e BACT determination along with the existing CO2e BACT determinations for similar plants. All data in the table is based on the information obtained from the permit application submitted by SABIC Innovative Plastics Mt. Vernon, LLC, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies. All limitations in parenthesis were not obtained from the RBLC but were calculated to provide a consistent basis for comparing emissions rates to the proposed project.

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating (MMBtu/hr)	Limitation	Control Method
Draft Permit No. 129-33998-00002 Proposed Limit	**SABIC Innovative Plastics Mt. Vernon, LLC *proposed***	**Proposed**	**Natural Gas-Fired Boiler (CG1 BOILER)**	**249 MMBtu/hr**	**133,521 tons CO2e per rolling 12-month period**	**Firing natural gas only, Boiler insulation, Efficient Burner design, Air Preheat or Economizers, Improved Combustion Measures: Optimization & Digital Control System, Minimization of Air infiltration, Improved Combustion Measures: Combustion Tuning,**

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating (MMBtu/hr)	Limitation	Control Method
						Operating and Maintenance (O&M) Practices, Condensation Return System, Steam line maintenance, and thermal efficiency of 80%.
Permit No. T147-32322-00062	Ohio Valley Resources, Rockport, IN	9/25/2013	Four NG Fired Boilers	218, each	CO2:59.61 tons/MMCF, combined fuel < 2,802 MMCF/yr	Natural gas fuel, Proper boiler design and good combustion practices, energy efficient design features; air inlet controls, heat recovery, condensate recovery and blowdown heat recovery & thermal efficiency of 80% (HHV)
Permit No. T141-31003-00579	St Joseph Energy Center, LLC New Carlisle, IN	12/23/2013	Two (2) natural gas fired auxiliary Boilers	80, each	81,996 tons per year combined	Good operation and maintenance practices; combustion tuning; oxygen trim controls and oxygen analyzers; equipped with economizer; energy efficient refractory; condensate return system and hot lines; 80% thermal efficiency (HHV)
LA-0272	Dyno Nobel Louisiana Ammonia, LLC, Jefferson County, LA	3/27/2013	Commissioning Boilers 1 & 2 (CB-1 & CB-2)	217	55,986 tons per year	(P) Energy efficiency measure: economizers and insulation; improved combustion measures (i.e tuning , optimization, and instrumentation); and minimize air infiltration
NE-0054	Cargill, Inc, Washington County, NE	9/12/2013	Boiler K, Natural gas	300	CO2: 178 lbs/lb steam 153,743 tons/year	Good Combustion Practices
IA-0106	CF Industries Nitrogen , LLC - Port Neal Nitrogen Complex, Woodbury, IA	7/12/2013	Two NG Boilers	456	CO2: 117 lbs/MMBtu Methane;0.0023 lb/MMBtu; N2O: 0.0006 lb/MMBtu 234,168 tons per year	Proper operation and use of natural gas
LA-0266	Crosstex Processing Services, LLC - Eunice Gas Extraction Plant, Acadia, LA	5/1/2013	Natural Gas boiler	359	87.6 tons/mm lb steam	Energy efficiency: improved combustion measure (e.g, combustion tuning, optimization using parametric testing, advanced digital instrumentation such as

BACT ID or Permit #	Facility	Issued Date	Process Description	Rating (MMBtu/hr)	Limitation	Control Method
						temperature sensors, O2 monitors, CO trim control); economizer; insulation and minimized air infiltration.
IA-0105	Iowa Fertilizer Company, Lee County, IA	10/26/2012	Auxiliary Boiler	472.4	CO2: 117 lbs/MMBtu Methane;0.0 023 lb/MMBtu; N2O: 0.0006 lb/MMBtu 51,748 tons per year	Good Combustion Practices
Permit No. T147-30464-00060	Indiana Gasification, LLC	6/27/2012	Auxiliary Boiler	172	CO2: 88,167 tons/year	Clean fuel (NG) efficient design, 81% thermal efficiency
CA-1212	Palmdale Hybrid Power Project, Los Angeles, CA	10/18/2011	Auxiliary Boiler	110	None	Annual Boiler tuneup

The use of natural gas fuel and a high thermal efficiency design are proposed for the boiler. The boiler will be designed to achieve a minimum 80% thermal efficiency (higher heating value, HHV).

Operation and maintenance according to the manufacturer's emission-related instructions or per a facility-developed maintenance plan (in a manner consistent with safety and good air pollution control practices for minimizing emissions) will prevent generation of additional GHG emissions due to efficiency losses over the lifetime of a piece of combustion equipment. An efficient burner design will be employed, taking into account the size, operating loads, and other site-specific conditions and objectives for the boiler. As part of the O&M practices, the air handling systems for the boilers will be periodically inspected for leaks and combustion tuning of the boiler will be conducted on an as-needed basis to address any decreases in boiler efficiency over time. The source will develop and implement specific O&M practices and perform boiler tune-ups for each boiler following the requirements of 40 CFR 63 Subpart DDDDD.

The proposed auxiliary boilers (AUX BOILER and AUX2 BOILER) are intended to be stand-by units that would not operate at maximum capacity for a significant number of hours except under unusual circumstances. As such, the use of an air preheater or an economizer would not be effective or economically feasible for these boilers, because there would be no measurable improvement in energy efficiency (or reduction in CO2e emissions), and this option should not be specified as a BACT requirement for the auxiliary boilers. If the additional boiler to be installed under AOS2 (CG1 BOILER) operates as a primary service boiler, an air preheater or economizer would be installed for this unit.

The effectiveness of a condensate return system for each boiler cannot be estimated at this time and is expected to be low since condensate from some plant areas will not be returned. In addition, condensate return systems would provide negligible benefit for stand-by (auxiliary) boilers. As such, the use of a condensate return system should not be specified as a BACT requirement for any of the boilers.

As mentioned in Step 2, the effectiveness of a blowdown heat exchanger for auxiliary boilers is expected to be negligible. In addition, the effectiveness of blowdown heat exchange for an optional boiler to be installed under AOS2 (CG1 BOILER) cannot be estimated at this time. Therefore, the use of a blowdown heat exchange is not specified as a BACT requirement for the CG1 BOILER.

SABIC proposes the following as BACT for GHG emissions from the proposed CG1 BOILER:

1. The boiler shall fire natural gas only.

2. Operating and Maintenance (O&M) Practices;

3. Combustion Tuning;

4. Boiler will be equipped with efficient low NO_X burners;

5. Boiler will be equipped with digital control instrumentation, oxygen trim controls and oxygen analyzers;

6. Energy efficient refractory will be installed;

7. Air infiltration will be minimized; and

8. Insulation of steam and hot water lines will be maintained.

9. Total emissions from the auxiliary boiler (PB) shall not exceed 133,521 tons of CO_2e per 12 consecutive month period with compliance determined on a monthly basis.

Step 5: Select BACT

Pursuant to 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD), IDEM has established the following as BACT for the GHG for the Natural Gas-Fired Boiler, identified as CG1 BOILER:

1. The boiler shall fire natural gas only.

2. Boiler insulation;

3. Efficient Burner design;

4. Improved Combustion Measures: Optimization & Digital Control System;

5. Minimization of Air infiltration;

6. Improved Combustion Measures: Combustion Tuning;

7. Operating and Maintenance (O&M) Practices;

8. Steam line maintenance;

9. The Boiler shall achieve a minimum 80% thermal efficiency of (higher heating value, HHV);

10. Total CO2e emissions from the auxiliary boiler (PB) shall not exceed 133,521 tons of CO2e per 12 consecutive month period with compliance determined at the end of each month; and

11. If CG1 BOILER operates as an auxiliary boiler, no additional BACT requirements apply. But if CG1 BOILER is a primary use boiler, the following item will be included as BACT:

    (a) Air Preheater or Economizer.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Greg Michael
SABIC Innovative Plastics Mt Vernon LLC
1 Lexan Lane
Mount Vernon, IN 47620

DATE: November 20, 2014

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Title V PSD/SSM
129-33998-00002

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
«Resp_Off_If_applicable»
«Consultant_if_applicable»
«Other_persons»
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

November 20, 2014

TO: Alexandria Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: SABIC Innovative Plastics Mt. Vernon LLC
Permit Number: 129-33998-00002

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	CDENNY 11/20/2014 SABIC Innovative Plastics Mt Vernon LLC 129-33998-00002 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Greg Michael SABIC Innovative Plastics Mt Vernon LLC 1 Lexan Lane Mount Vernon IN 47620 (Source CAATS)									
2		Joseph A Castrale President & GM SABIC Innovative Plastics Mt Vernon LLC 1 Lexan Lane Mount Vernon IN 47620 *(RO CAATS)*									
3		Posey County Commissioners County Courthouse, 126 E. 3rd Street Mount Vernon IN 47620 *(Local Official)*									
4		Posey County Health Department 126 E. 3rd St, Coliseum Bldg Mount Vernon IN 47620-1811 *(Health Department)*									
5		Mount Vernon City Council and Mayors Office 520 Main Street Mount Vernon IN 47620 *(Local Official)*									
6		Dr. Jeff Seyler Univ. of So Ind., 8600 Univ. Blvd. Evansville IN 47712 *(Affected Party)*									
7		Mr. Don Mottley Save Our Rivers 6222 Yankeetown Hwy Boonville IN 47601 *(Affected Party)*									
8		Alexandrian Public Library 115 West 5th Mt. Vernon IN 47620 *(Library)*									
9		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 *(Affected Party)*									
10		Mrs. Connie Parkinson 510 Western Hills Dr. Mt. Vernon IN 47620 *(Affected Party)*									
11		Jean Webb 710 S Kenmore Dr Evansville IN 47714 *(Affected Party)*									
12		Robert Hess c/o Mellon Corporation 830 Post Road East, Suite 105 Westport CT 06880 *(Affected Party)*									
13		Juanita Burton 7911 W. Franklin Road Evansville IN 47712 (Affected Party)									
14		David Boggs 216 Western Hills Dr Mt Vernon IN 47620 *(Affected Party)*									
15		John Blair 800 Adams Ave Evansville IN 47713 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	CDENNY 11/20/2014 SABIC Innovative Plastics Mt Vernon LLC 129-33998-00002 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Anita QSEM Solutions, Inc. 400 Kemper Meadow Drive, Suite 400 Cincinnati OH 45240 (Consultant)									
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Air Quality Analysis

SABIC

Mount Vernon, Indiana (Posey County)

Background

SABIC in Mt. Vernon, Indiana has submitted updated air dispersion modeling to address culpability concerns to modeled 1-hour NO_2 NAAQS violations that were discovered in another PSD permitting project. SABIC has proposed the following changes to its CoGen project: reactivate the Riley Boiler; shut down BW1 and BW2; reduct the H boiler to the stack for BW1 and BW2; install two new Package Boilers. The new facility configuration is a major emitter of greenhouse gases only, which does not require air dispersion modeling. However, since SABIC was determined to be culpable for a 1-hour NO_2 NAAQS violation for a future nearby facility, IDEM has required SABIC to conduct air dispersion modeling with the revised facility configuration to address this violation.

Culpability Analysis

The SABIC facility in Mt. Vernon, Indiana was determined to be culpable for a 1-hour NO_2 NAAQS violation in the PSD modeling for Midwest Fertilizer. SABIC has changed the scope of the CoGen project to include the following: reactivate the Riley Boiler; shut down BW1 and BW2; reduct the H boiler to the stack for BW1 and BW2; install a second Package Boiler near the CoGen; and install a third Package Boiler near the Ultem area. No significant changes to criteria pollutants emissions from the CoGen project are expected, however a culpability modeling analysis was required.

Midwest Fertilizer's NAAQS modeling was re-run to account for the future emissions from the SABIC facility after the CoGen Project is completed. The modeling showed that the highest contribution from the SABIC facility towards a 1-hour NO_2 NAAQS violation was 0.71 µg/m^3. The SABIC facility contributed concentrations towards a 1-hour NO_2 NAAQS violation that are under the significant impact level of 7.5 µg/m^3, as shown in Table 1 below. Therefore, it is concluded that the SABIC facility is not culpable for the 1-hour NO_2 NAAQS violations found in the Midwest Fertilizer NAAQS modeling.

TABLE 1 – Culpability Analysis

Source	NAAQS Violation Concentration (µg/m^3)	Source Contribution to Violation (µg/m^3)	1-hour NO_2 SIL (µg/m^3)	Source Culpable to NAAQS Violation?
SABIC Facility	191.7669	0.70842	7.5	No