INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

Ms. Faye Houser
Senior HSES Specialist
PQ Corporation
P.O. Box 669
Jeffersonville, IN 47130-0669

Re: 019-29779-00018
Significant Permit Modification to
Part 70 Renewal No.: T 019-23178-00018

Dear Ms. Houser:

PQ Corporation was issued a Part 70 Operating Permit Renewal on September 4, 2008, for a stationary sodium silicate and sodium aluminosilicate manufacturing facility. A letter requesting changes to this permit was received on October 3, 2010. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

PQ Corporation has applied to install an additional control device, a Type W Rotoclone, that will work in conjunction with the existing baghouse for particulate control on the existing sodium silicate storage silo.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance. A copy of this permit is available on the Internet at: www.in.gov/ai/appfiles/idem-caats/.

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 Kimberly Cottrell, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Kimberly Cottrell or extension (3-0870), or dial (317) 233-0870.

Sincerely,

Tripurari P. Sinha, Ph. D., Section Chief
Permits Branch
Office of Air Quality

Attachments:
Updated Permit
Technical Support Document
PTE Calculations

klc

cc: File – Clark County
Clark County Health Department
U.S. EPA, Region V
Southeast Regional Office
Compliance and Enforcement Branch

Interested Parties

Mr. Larry Masaro
PQ Corporation
P.O. Box 840
Valley Forge, PA 19482-0840

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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

PQ Corporation
1101 Quartz Road
Clarksville, IN 47129

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

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 for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T019-23178-00018	
Issued by/Original Signed by: Alfred C. Dumaual, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date: September 4, 2008 Expiration Date: September 4, 2013

Significant Permit Modification No.: 019-29779-00018	
Issued by: Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: September 4, 2013

TABLE OF CONTENTS

A. SOURCE SUMMARY 5

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 8

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 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.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]
B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]
B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]
B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]
B.20 Source Modification Requirement [326 IAC 2-7-10.5]
B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]
B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]
B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

C. SOURCE OPERATION CONDITIONS 19

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

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

Compliance Requirements [326 IAC 2-1.1-11]
C.8 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]
C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
C.10 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.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.12 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
C.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
C.14 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.15 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.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]
C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

Stratospheric Ozone Protection
C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

D.1. EMISSIONS UNIT OPERATION CONDITIONS.....27

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.1.1 Particulate Matter (PM) [326 IAC 6.5-1-2(b)]
D.1.2 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]
D.1.3 Particulate Matter (PM) [326 IAC 6.5-2-9]
D.1.4 PSD Minor Limit [326 IAC 2-2]
D.1.5 Nitrogen Oxides (NO_X) [326 IAC 10-1]
D.1.6 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1]
D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.1.8 Testing Requirements [326 IAC 2-7-6(1),(6)]
D.1.9 Particulate Control [326 IAC 2-7-6(6)]
D.1.10 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)].....30
D.1.11 Visible Emissions Notations

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19].....30
D.1.12 Record Keeping Requirements
D.1.13 Reporting Requirements for Nitrogen Oxides (NO_X)

D.2. EMISSIONS UNIT OPERATION CONDITIONS.....32

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.2.1 PSD Minor Limit [326 IAC 2-2]
D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]
D.2.3 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Compliance Determination Requirements
D.2.4 Particulate Control [326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)]
D.2.6 Visible Emissions Notations
D.2.7 Parametric Monitoring
D.2.8 Broken or Failed Bag Detection

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.2.9 Record Keeping Requirements

D.3. EMISSIONS UNIT OPERATION CONDITIONS.....37

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]
D.3.3 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

E.1 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements 40

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]
E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]
E.1.2 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Certification 41

Emergency Occurrence Report 42

Quarterly Report.....44

Quarterly Deviation and Compliance Monitoring Report.....45

Attachment A:..Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc]

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.3 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 sodium silicate and sodium aluminosilicate manufacturing facility.

Source Address:	1101 Quartz Road, Clarksville, IN 47129
General Source Phone Number:	(812) 288-7186
SIC Code:	2819
County Location:	Clark
Source Location Status:	Nonattainment for $PM_{2.5}$ standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Minor 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) Two (2) fire tube boilers (SG-1001 and SG-1002), constructed in 1991, each rated at seventeen and five-tenths (17.5) million British thermal units (MMBtu) per hour and exhausting at one (1) stack, identified as S-2. The boilers are fired by natural gas, No. 2 fuel oil and No. 4 fuel oil or biodiesel as a backup fuel.

(b) One (1) natural gas-fired dryer, constructed in 1991, rated at ten (10) million British thermal units (MMBtu) per hour and exhausting through a baghouse separator with no unit identification at stack S-6. The dryer uses propane as a backup fuel. This dryer is an insignificant source when burning natural gas.

(c) One (1) melting furnace with a maximum heat input capacity of 19.7 MMBtu per hour, fired by natural gas or fuel oil, and exhausting at stack S-1. The furnace is fired using natural gas, with No. 2 fuel oil and No. 4 fuel oil as a backup fuel. The furnace was constructed in 1938 and rebuilt in 1998 and 2003 pursuant to Administrative Amendment 019-16660-00018 issued on February 11, 2003.

(d) Material storage and handling facilities, constructed before August 7, 1977, with a maximum material throughput of 155 tons per hour, including:

(1) Aluminum trihydrate storage and transfer facilities, with a maximum material throughput of 33.5 tons per hour, consisting of one (1) pneumatic conveyor system equipped with a baghouse with no unit identification exhausting at stack S-3; one (1) 400 ton capacity storage silo equipped with a baghouse with no unit identification exhausting at stack S-4; and one (1) weigh bin with a maximum capacity of 12,580 pounds per hour equipped with a baghouse with no unit identification exhausting at stack S-5.

(2) Sodium silicate storage and transfer facilities, with a maximum of material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo. Particulate emissions are controlled by a rotoclone and a baghouse with no unit identification for either particulate control device. The rotoclone exhausts to stack R-12. The baghouse exhausts to stack S-12.

(3) Sand and soda ash storage and transfer facilities, with a total maximum material throughput of 84 tons per hour, consisting of the following:

(A) one (1) 1,500 ton capacity storage silo for sand, equipped with one (1) bin vent with a design grain loading of 0.0034 gr/dscf and design airflow rate 277 dscfm, with emissions from the bin vent being exhausted through stack SSBV;

(B) one (1) 940 ton capacity storage silo for soda ash, with the emissions from both silos being controlled by one (1) baghouse with no unit identification, with the sand storage emissions not exhausted through stack SSBV and soda ash storage emissions exhausted through stack S-8;

(C) two (2) weigh hoppers connected to one (1) baghouse with no unit identification exhausting at stack S-7;

(D) one (1) pneumatic conveying system for the transfer of sand and soda ash from the weigh hoppers to the furnace equipped with a baghouse with no unit identification.

(4) Sodium aluminosilicate transfer, storage, and loading facilities, with a maximum material throughput of 35 tons per hour, consisting of the following:

(A) a pneumatic conveyor system for transfer to the storage silos, equipped with one (1) baghouse separator with no unit identification for particulate control exhausting at stack S-6;

(B) two (2) 625 ton capacity storage silos each equipped with one (1) baghouse with no unit identification for particulate control exhausting at stacks S-9 and S-10;

(C) one (1) pneumatic conveyor system for truck and rail car loading, equipped with a baghouse with no unit identification for particulate control exhausting at stack S-11.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

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

(b) Degreasing operations that do not exceed 145 gallons per 12 months. [326 IAC 8-3-2] [326 IAC 8-3-5]

(c) Other emission units and activities with potential emissions below the threshold in 326 IAC 2-7-1(21):

(1) Aluminum trihydrate unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]

(2) Sand and soda ash unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]

(3) Sodium Silicate unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]

A.4 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) The Part 70 Operating Permit Renewal, T019-23178-00018, is issued for a fixed term of five (5) years from the issuance 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] [IC 13-17-12]

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. 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) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use 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(34).

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. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 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 of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal 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(34).

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

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(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.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date 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

The PMP extension notification does not 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(34).

The Permittee shall implement the PMPs.

(c) 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. The PMPs and their submittal do not 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(34).

(d) 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.

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.

(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, or Southeast Regional Office 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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.

(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 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(34).

(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. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(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.

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 date of permit issuance, 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 date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) 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.

(c) 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.

(d) 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 this permit's issuance;

(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.

(e) 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).

(f) 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)]

(g) 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 T019-23178-00018 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 permit, all previous registrations and permits are superseded by this 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 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 Operating 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)] The notification 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(34).

(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.16 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 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 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(34).

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, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 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 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(34).

(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.18 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 or notice 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.19 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 limitations provided in 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 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(34).

(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)]
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.

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

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 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.22 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

Any such application 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(34).

(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.23 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.24 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 condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

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

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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 thirty percent (30%) 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.2 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.

C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.4 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.5 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.6 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 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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 that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(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 Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

C.7 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted 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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not 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(34).

(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 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(34).

(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.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 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.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, 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 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(34).

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.10 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 shall be 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.11 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 shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

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

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

C.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to 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 excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(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; and/or

(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 record the reasonable response steps taken.

C.14 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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 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(34).

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

C.15 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]

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.

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 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(34).

C.16 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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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 new source review 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/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and

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

(d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) 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

(2) 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.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include 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(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(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) 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.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) 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) and/or 326 IAC 2-3-1 (qq), 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).

(f) The report for project at an existing emissions unit shall be submitted no later than 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 (d)(1) and (2) 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) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted 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

(g) 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.18 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 applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Two (2) fire tube boilers (SG-1001 and SG-1002), constructed in 1991, each rated at seventeen and five-tenths (17.5) million British thermal units (MMBtu) per hour and exhausting at one (1) stack, identified as S-2. The boilers are fired by natural gas, No. 2 fuel oil and No.4 fuel or biodiesel as a back up fuel.

(b) One (1) natural gas-fired dryer, constructed in 1991, rated at ten (10) million British thermal units (MMBtu) per hour and exhausting through a baghouse separator with no unit identification at stack S-6. The dryer uses propane as a backup fuel.

(c) One (1) melting furnace with a maximum heat input capacity of 19.7 MMBtu per hour, fired by natural gas or fuel oil, and exhausting at stack S-1. The furnace is fired using natural gas, with No. 2 fuel oil and No. 4 fuel oil as a back up fuel. The furnace was constructed in 1938 and rebuilt in 1998 and 2003 pursuant to Administrative Amendment 019-16660-00018 issued on February 11, 2003.

(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 Particulate Matter (PM) [326 IAC 6.5-1-2(b)]

Pursuant to 326 IAC 6.5-1-2(b)(2) (Nonattainment Area Particulate Limitations for Fossil Fuel Fired Steam Generators; Liquid Fuel) and 326 IAC 6.5-1-2(b)(3) (Nonattainment Area Particulate Limitations for Fossil Fuel Fired Steam Generators; Gaseous Fuel), particulate matter emissions from the boilers (SG-1001 and SG-1002) shall be limited to 0.15 pounds per million Btu heat input when fuel oil is burned and 0.01 grains per dry standard cubic foot when natural gas is burned.

D.1.2 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Emission Limitations), the particulate matter emissions from the dryer shall be limited to 0.03 grains per dry standard cubic foot.

D.1.3 Particulate Matter (PM) [326 IAC 6.5-2-9]

Pursuant to 326 IAC 6.5-2-9 (PQ Corporation), the particulate matter emissions from the furnace shall be limited to 51.8 tons per year and 1.4 pounds per ton of sodium silicate produced.

D.1.4 PSD Minor Limit [326 IAC 2-2]

Emissions of nitrogen oxides from the melting furnace exhausting at S-1, boilers SG-1001 and SG-1002, and the natural gas dryer exhausting at S-6 shall be limited to ninety-eight (98) tons per twelve (12) consecutive month period. The input of natural gas to the furnace and furnace natural gas equivalents shall be limited to 180 MMscf per twelve (12) consecutive month period. NO_x emissions from the furnace shall not exceed 1,091 lbs/MMscf when burning natural gas and 102 lbs/kgal when burning No. 2 fuel oil, No. 4 fuel oil or a blend of No. 2 and No. 4 fuel oils. For purposes of determining compliance:

(a) Every gallon of No.2 fuel oil, No. 4 fuel oil or combination of No.2 and No. 4 fuel oils burned in the furnace shall be equivalent to 93.5 cubic feet of natural gas based on nitrogen oxides emissions.

(b) Every standard cubic foot of natural gas burned in either boiler SG-1001 or SG-1002 is equivalent to burning 0.092 standard cubic feet of natural gas in the furnace based on nitrogen oxides emissions.

(c) Every gallon of No.2 fuel oil, No.4 fuel oil, biodiesel or combination of the fuel oils burned in either boiler SG-1001 or SG-1002 is equivalent to burning 18.33 standard cubic feet of natural gas in the furnace based on nitrogen oxides emissions.

(d) Every standard cubic foot of natural gas burned in dryer is equivalent to burning 0.092 standard cubic feet of natural gas in the furnace based on nitrogen oxides emissions.

This limit is required to limit the emissions of nitrogen oxides from the entire source to less than one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit will also limit emissions of sulfur oxides to less than one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (PSD) not applicable.

D.1.5 Nitrogen Oxides (NO_X) [326 IAC 10-1]

Pursuant to 326 IAC 10-1, the Permittee shall install, operate and maintain the following Best Available Control Technology (BACT):

(a) Reduce the amount of excess air in the flame zone of the burners by sealing the burners and furnace box to prevent infiltration of excess air.

(b) Use long luminous flames to reduce the peak flame temperature and gas residence time at peak temperatures.

(c) Determine the flame pattern that provides optimal conditions for minimizing NO_X emissions.

(d) The Permittee shall monitor the flame pattern using visual inspections and make necessary adjustments to maintain low NO_X emissions. The flame patterns will be observed by a trained employee at least once per day when the furnace is in normal operation. A trained employee is an employee who has worked at the plant for at least one month and has been trained in the appearance and characteristics of a normal flame pattern. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(e) The Permittee shall conduct visual inspections of the furnace to ensure integrity of the box and minimize air infiltration. Inspections shall be conducted at least three (3) times each month when the furnace is in operation.

(f) During normal operation of the furnace, the Permittee shall maintain the crown temperature and oxygen levels in the furnace as follows:

Fuel	**Crown Temperature Range** (^oF)	**Excess Oxygen Range** (%)
Natural Gas	2200 - 2800	0 - 2.0
Fuel Oil	2200 - 2800	0 - 2.0

The Permittee shall monitor and record the crown temperature and excess oxygen levels at least once per day when the furnace is operating normally.

(g) The NO_X emissions from the furnace shall not exceed 1,091 lbs/MMscf when burning natural gas and 102 lbs/kgal when burning No. 2 fuel oil, No. 4 fuel oil or a blend of No. 2 and No. 4 fuel oils. These emission limits are necessary to achieve the 40% reduction in NO_X emissions as required by 326 IAC 10-1.

D.1.6 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

(a) Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations) the SO_2 emissions from the two (2) 17.5 MMBtu/hr oil-fired boilers (SG-1001 and SG-1002) shall not exceed five tenths (0.5) pound per million British thermal units heat input. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

(b) Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations), the SO_2 emissions from the melting furnace shall not exceed five-tenths (0.5) pound per million Btu heat input while combusting fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for each facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

D.1.8 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 60 and 180 days after initial usage of biodiesel as a fuel in boiler SG-1001 or SG-1002, the Permittee shall perform a one time stack test, to verify the NO_x and SO_2 emission factors used to determine the potential emissions from one of the boilers while combusting biodiesel, utilizing methods as approved by the Commissioner. Section C – Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

D.1.9 Particulate Control [326 IAC 2-7-6(6)]

In order to comply with Condition D.1.2 the baghouse (exhausting to Stack S-6) for PM and PM_{10} control shall be in operation and control emissions from the dryer at all times that the dryer is in operation.

D.1.10 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4]

Compliance of the two (2) boilers shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two (2) 17.5 MMBtu/hr boilers, 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.

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

D.1.11 Visible Emissions Notations

(a) Visible emission notations of the boiler stack exhausts (stack S-2) and the furnace stack exhaust (stack S-1) shall be performed once per day during normal daylight operations when burning fuel oil. 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, the Permittee shall take reasonable response steps. Observation of abnormal emissions that do not violate 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]

D.1.12 Record Keeping Requirements

(a) To document compliance with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (6) below. Note that pursuant to 40 CFR 60 Subpart Dc, the fuel oil sulfur limit applies at all times including periods of startup, shutdown, and malfunction.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil and natural gas usage since last compliance determination period and equivalent sulfur dioxide and NO_X emissions;

(3) To certify compliance when burning natural gas only, the Permittee shall maintain records of fuel used; and

If the fuel supplier certification is used to demonstrate compliance when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

(b) To document compliance with Condition D.1.11, the Permittee shall maintain a daily record of visible emission notations of the boiler stack exhausts (stack S-2) and the furnace stack exhaust (stack S-1) while combusting fuel oil. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.1.13 Reporting Requirements for Nitrogen Oxides (NO_X)

A quarterly summary of the information to document the compliance status with Condition D.1.4 shall be submitted using the quarterly reporting form located at the end of this permit, or its equivalent, no later than thirty (30) days after the end of each quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee requires 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(34).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) Material storage and handling facilities, constructed before August 7, 1977, with a maximum material throughput of 155 tons per hour, including:

(1) Aluminum trihydrate storage and transfer facilities, with a maximum material throughput of 33.5 tons per hour, consisting of one (1) pneumatic conveyor system equipped with a baghouse with no unit identification exhausting at stack S-3; one (1) 400 ton capacity storage silo equipped with a baghouse with no unit identification exhausting at stack S-4; and one (1) weigh bin with a maximum capacity of 12,580 pounds per hour equipped with a baghouse with no unit identification exhausting at stack S-5.

(2) Sodium silicate storage and transfer facilities, with a maximum of material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo. Particulate emissions are controlled by a rotoclone and a baghouse with no unit identification for either particulate control device. The rotoclone exhausts to stack R-12. The baghouse exhausts to stack S-12.

(3) Sand and soda ash storage and transfer facilities, with a total maximum material throughput of 84 tons per hour, consisting of the following:

(A) one (1) 1,500 ton capacity storage silo for sand, equipped with one (1) bin vent with a design grain loading of 0.0034 gr/dscf and design airflow rate 277 dscfm, with emissions from the bin vent being exhausted through stack SSBV;

(B) one (1) 940 ton capacity storage silo for soda ash, with the emissions from both silos being controlled by one (1) baghouse with no unit identification, with the sand storage emissions not exhausted through stack SSBV and soda ash storage emissions exhausted through stack S-8;

(C) two (2) weigh hoppers connected to one (1) baghouse with no unit identification exhausting at stack S-7;

(D) one (1) pneumatic conveying system for the transfer of sand and soda ash from the weigh hoppers to the furnace equipped with a baghouse with no unit identification.

(4) Sodium aluminosilicate transfer, storage, and loading facilities, with a maximum material throughput of 35 tons per hour, consisting of the following:

(A) a pneumatic conveyor system for transfer to the storage silos, equipped with one (1) baghouse separator with no unit identification for particulate control exhausting at stack S-6;

(B) two (2) 625 ton capacity storage silos each equipped with one (1) baghouse with no unit identification for particulate control exhausting at stacks S-9 and S-10;

(C) one (1) pneumatic conveyor system for truck and rail car loading, equipped with a baghouse with no unit identification for particulate control exhausting at stack S-11.

(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 PSD Minor Limit [326 IAC 2-2]

The Permittee shall be subject to the following PM and PM_{10} limitations:

Unit	**PM Limit** (lbs/hr)	**PM_{10} Limit** (lbs/hr)
S-3 Baghouse	1.06	1.06
S-12 Baghouse	1.06	1.06
S-8 Baghouse	1.32	1.32
S-7 Baghouse	1.32	1.32
S-6 Baghouse	0.55	0.55
S-11 Baghouse	0.55	0.55

Compliance with these PM and PM_{10} emission limits from the storage and handling facilities, in conjunction with the total potential to emit of PM and PM_{10} from the rest of the source including emissions from material handling, paved roads, and unpaved roads, shall ensure that the source-wide PM and PM_{10} emissions are less than one hundred (100) tons per twelve consecutive month period, rendering the requirements of 326 IAC 2-2 not applicable.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for each facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

D.2.3 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Emission Limitations), the particulate matter emissions from the aluminum trihydrate storage and transfer facilities; sodium silicate storage and transfer facilities; sand and soda ash transfer facilities; and the sodium aluminosilicate transfer, storage, and loading facilities shall be limited to 0.03 grains per dry standard cubic foot.

Compliance Determination Requirements

D.2.4 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Condition D.2.1 and D.2.3, the baghouses (exhausting to Stacks S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11 and S-12) for PM and PM_{10} control shall be in operation and control emissions from the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate at all times that the sodium silicate or sodium aluminosilicate production facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

(a) In order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-7 or S-8 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}.

(b) Within five years of performing PM and PM_{10} testing for the S-7 or S-8 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-6 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}.

(c) Within five years of performing PM and PM_{10} testing for the S-6 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-3 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}.

(d) Within five years of performing PM and PM_{10} testing for the S-3 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-11 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}.

(e) Within one hundred eighty (180) days of operation of the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, in order to demonstrate compliance with Condition D.2.1, the Permittee shall performing testing to establish the a minimum flow rate (in gallons per minute (GPM)) across the rotoclone.

Section C – Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

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

D.2.6 Visible Emissions Notations

(a) Daily visible emission notations of stack exhausts S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-12, and R-12, shall be performed day during normal daylight operations. 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, the Permittee shall take reasonable response steps. Observation of abnormal emissions that do not violate 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.

D.2.7 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the most recent valid compliance demonstration, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit.

(b) The Permittee shall record the flow rate across the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the flow rate across the rotoclone is below 4.0 gallons per minute (GPM), or the minimum flow rate established during the most recent valid compliance demonstration, the Permittee shall take reasonable response steps. A flow rate that is below the above mentioned minimum is not a deviation from this permit.

(c) 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.

(d) The instruments used for determining the pressure and flow rate shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.8 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit-has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.2.9 Record Keeping Requirements

(a) To document compliance with Condition D.2.6, the Permittee shall maintain daily records of visible emission notations of the exhaust from stacks S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11 and S-12 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(b) To document compliance with Condition D.2.7, the Permittee shall maintain records once per day of the pressure drop across the rotoclone and baghouses used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day.)

(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:

(a) Degreasing operations not exceeding 145 gallons per 12 months. [326 IAC 8-3-2] [326 IAC 8-3-5]

(b) Material unloading operations, including:

(1) Aluminum trihydrate unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]

(2) Sand and soda ash unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]

(3) Sodium Silicate unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (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)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations existing as of January 1, 1980, located in Clark County and which have potential emissions of one hundred (100) tons or greater per year, the owner or operator shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility without remote solvent reservoirs, existing as of January 1, 1980, located in Clark, Elkhart, Floyd, Lake, Marion, Porters, or St. Joseph Counties, shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C)(one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at the pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty two (32) millimeters of mercury and six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38 °C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon absorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 325 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility, existing as of July 1, 1990, shall ensure the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.3.3 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Emission Limitations), the particulate matter emissions from the unloading of aluminum trihydrate, sand, soda ash, and sodium silicate shall be limited to 0.03 grains per dry standard cubic foot.

SECTION E.1 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements

Emission Unit Description:

(a) Two (2) fire tube boilers (SG-1001 and SG-1002), constructed in 1991, each rated at seventeen and five-tenths (17.5) million British thermal units (MMBtu) per hour and exhausting at one (1) stack, identified as S-2. The boilers are fired by natural gas, No. 2 fuel oil and No.4 fuel or biodiesel as a back up fuel.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for boilers SG-1001 and SG-1002, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

E.1.2 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units, which are incorporated by reference as 326 IAC 12, and included as Attachment A, for boilers SG-1001 and SG-1002 as specified as follows:

(a) 40 CFR 60.40c
(b) 40 CFR 60.41c
(c) 40 CFR 60.42c (d), (h)(1), (2), (i), (j)
(d) 40 CFR 60.43c (d), (e)
(e) 40 CFR 60.44c
(f) 40 CFR 60.45c
(g) 40 CFR 60.46c
(h) 40 CFR 60.47c
(i) 40 CFR 60.48c
(j) 40 CFR 60.48c

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: PQ Corporation
Source Address: 1101 Quartz Road, Clarksville, IN 47129
Part 70 Permit No.: T019-23178-00018

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: PQ Corporation
Source Address: 1101 Quartz Road, Clarksville, IN 47129
Part 70 Permit No.: T019-23178-00018

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), no later than four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and
- The Permittee must submit notice in writing or by facsimile no later than two (**2**) 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 Describe: 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 Quarterly Report

Source Name: PQ Corporation
Source Address: 1101 Quartz Road, Clarksville, IN 47129
Part 70 Permit No.: T019-23178-00018
Facility: Melting Furnace exhausting at S-1, Boilers SG-1001 & SG-1002, and Natural Gas Dryer exhausting at S-6
Parameter: NO_X
Limit: 180 MMCF of natural gas (or fuel oil equivalent) per twelve (12) consecutive month period.

YEAR: _____

Month	Fuel Usage for This Month (gallons)	Fuel Usage for Previous 11 Months (gallons)	Fuel Usage for 12-Month Period (gallons)

☐ No deviation occurred in this quarter.

☐ Deviations 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 AND ENFORCEMENT BRANCH

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: PQ Corporation
Source Address: 1101 Quartz Road, Clarksville, IN 47129
Part 70 Permit No.: T019-23178-00018

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:

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: _____

Attachment A: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Dc]

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 paragraphs (d), (e), (f), and (g) 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 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 subject 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 subject by this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 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 not meeting the definition of natural gas, 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) or diesel fuel oil numbers 1 or 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 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_2control 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); 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 oil and residual oil.

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.

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 heats any 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_2control 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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 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_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), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in 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_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), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in 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_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of SO_2in 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_2emissions limit or the 90 percent SO_2reduction 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_2emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of 50 percent (0.50) of the potential SO_2emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in 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_2reduction 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_2in 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_2in 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_2in excess of the following:

(1) The percent of potential SO_2emission rate or numerical SO_2emission 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_2emission 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= Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2emission 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_2emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2control) 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_2emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected 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 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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 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 can combust 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. 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.

(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_2emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 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_2emission 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_2emission limits under §60.42c is based on the average percent reduction and the average SO_2emission 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_2emission 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_2emission rate (E_{ho}) and the 30-day average SO_2emission 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_2emission rate, ng/J (lb/MMBtu);

E_w= SO_2concentration 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_2emission 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_2emission 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_2emission rate, in 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.

(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 $\%R_g$($\%R_g$o) is computed from E_{ao}o from paragraph (e)(1) of this section and an adjusted average SO_2inlet rate (E_{ai}o) using the following formula:

$$\%R_g o = 100\left(1 - \frac{E^{\circ}_{ao}}{E^{\circ}_{ai}}\right)$$

Where:

$\%R_g$o = Adjusted $\%R_g$, in percent;

E_{ao}o = Adjusted E_{ao}, ng/J (lb/MMBtu); and

E_{ai}o = Adjusted average SO_2inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai}o, an adjusted hourly SO_2inlet rate (E_{hi}o) is used. The E_{hi}o is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_l)}{X_l}$$

Where:

E_{hi}o = Adjusted E_{hi}, ng/J (lb/MMBtu);

E_{hi}= Hourly SO_2inlet rate, ng/J (lb/MMBtu);

E_w= SO_2concentration 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_2standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2standards 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_2emissions 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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 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 3A or 3B of appendix A–2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A–3 of this part or 17 of appendix A–6 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_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.

(8) Method 9 of appendix A–4 of this part 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 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 install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) 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 (c)(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 (c)(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 (c)(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 O2 (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 on a 30-day rolling average.

(14) After July 1, 2011, within 90 days after the date of completing each performance evaluation required by paragraph (c)(11) of this section, the owner or operator of the affected facility must either submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available 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.

(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).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 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_2emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2concentrations and either O_2or CO_2concentrations at the outlet of the SO_2control device (or the outlet of the steam generating unit if no SO_2control 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_2concentrations and either O_2or CO_2concentrations at both the inlet and outlet of the SO_2control device.

(b) The 1-hour average SO_2emission 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_2emission 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_2emission 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_2CEMS at the inlet to the SO_2control device shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted, and the span value of the SO_2CEMS at the outlet from the SO_2control device shall be 50 percent of the maximum estimated hourly potential SO_2emission 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_2CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission 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_2input 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_2at the inlet or outlet of 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 §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_2standards 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), (f), and (g) 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 continuous opacity monitoring system (COMS) for measuring the opacity of the 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 in §60.43c(c) and that is not required to install a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to install 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 §60.43c and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

(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 30 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 30 calendar days according to the requirements in §60.45c(a)(8).

(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) All COMS 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) Owners and operators of an 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 (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) 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

§60.45c(c). The CEMS specified in paragraph §60.45c(c) 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) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and 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 discharged 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. 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; or

(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. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(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) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that 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 is not required to operate a COMS.

(g) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and 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 permitting authority is not required to operate a COMS. 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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 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_2emissions. 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_2emission 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) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(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 (c)(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 (c)(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

(d) The owner or operator of each affected facility subject to the SO_2emission 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_2emission 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_2emission 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_2emission 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_2or 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 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 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 or maximum 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 or maximum 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_2standard, 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_2standard, 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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (TSD)
for a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	PQ Corporation
Source Location:	1101 Quartz Road, Clarksville, IN 47129
County:	Clark
SIC Code:	2819
Operation Permit Renewal No.:	T 019-23178-00018
Issuance Date:	September 4, 2008
Significant Permit Modification No.:	019-29779-00018
Permit Reviewer:	Kimberly Cottrell

Public Notice Information

On March 23, 2011, the Office of Air Quality (OAQ) had a notice published in the Evening News in Jeffersonville, Indiana, stating that the PQ Corporation had applied for a significant modification to their Part 70 Operating Permit Renewal issued on September 4, 2008 to install of a rotoclone for particulate control on the existing sodium silicate storage silo. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed 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 permit should be issued as proposed.

PQ Corporation Comments and IDEM's Responses

On March 21, 2011, OAQ received comments from Faye Houser, on behalf of PQ Corporation. 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:

Company Comment 1:

The site was given a street address for emergency response (911). The correct address is

PQ Corporation
1101 Quartz Road
Clarksville, IN 47129

The correct mailing address is

PQ Corporation
P.O. Box 669
Jeffersonville, IN 47130-0669

IDEM Response:

The permit has been updated with this new information.

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 sodium silicate and sodium aluminosilicate manufacturing facility.

Source Address:	~~7th Street and Missouri Avenue, Jeffersonville, Indiana 47130~~**1101 Quartz Road, Clarksville, IN 47129**
General Source Phone Number:	(812) 288- 7186
SIC Code:	2819
County Location:	Clark
Source Location Status:	Nonattainment for $PM_{2.5}$ standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

Reporting Forms:

Source Name:	PQ Corporation
Source Address:	~~7th Street and Missouri Avenue, Jeffersonville, Indiana 47130~~**1101 Quartz Road, Clarksville, IN 47129**
Part 70 Permit No.:	T019-23178-00018

Company Comment 2:

The Rotoclone has its own new stack and does not discharge from S-12.

IDEM Response:

The permit has been updated as follows:

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:

(d) (2) Sodium silicate storage and transfer facilities, with a maximum of material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo ~~equipped with a rotoclone and a baghouse with no unit identification for either particulate control device exhausting at stack S-12~~. **Particulate emissions are controlled by a rotoclone and a baghouse with no unit identification for either particulate control device. The rotoclone exhausts to stack R-12. The baghouse exhausts to stack S-12.**

Company Comment 3:

PQ Corporation wants to clarify compliance requirements under condition C.1 for particulate emissions (see below). Particulate emission requirements as stated in C.1 seem to require compliance with both condition C.1.(a) and C.1(b) at the same time. It was our understanding from previous discussions with IDEM that compliance was determined by meeting either condition C.1(a) or by meeting condition C.1(b) thereby allowing for periods of 60% opacity not to exceed 15 minutes during cleaning of the waste heat boiler tubes. (The waste heat boiler is not a fired boiler but recovers heat from the sodium silicate furnace exhaust. Particulates must be removed from the tubes periodically by using steam.)

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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 thirty percent (30%) 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.

IDEM Response:

The above language applies for all boiler operations and both (a) **and** (b) must be met. There is no change to the permit as a result of this comment.

Company Comment 4:

Condition D.1.5(f) – Excess oxygen limits. PQ Corporation makes more than one type of sodium silicate and therefore have to operate the furnace at different conditions. Although the limits specified in the permit are typical of how we operate, we request a wider excess oxygen range of 0 to 2% to allow for required furnace changes for different products.

IDEM Response:

The permit has been updated with this new information.

D.1.5 Nitrogen Oxides (NO_X) [326 IAC 10-1]

Pursuant to 326 IAC 10-1, the Permittee shall install, operate and maintain the following Best Available Control Technology (BACT):

(a) - (e) ...

(f) During normal operation of the furnace, the Permittee shall maintain the crown temperature and oxygen levels in the furnace as follows:

Fuel	**Crown Temperature Range** (^oF)	**Excess Oxygen Range** (%)
Natural Gas	2200 - 2800	~~1.0 - 1.6~~ **0 - 2.0**
Fuel Oil	2200 - 2800	~~1.0 - 3.0~~

Fuel	Crown Temperature Range (^{o}F)	Excess Oxygen Range (%)
		0 - 2.0

The Permittee shall monitor and record the crown temperature and excess oxygen levels at least once per day when the furnace is operating normally.

(g) ...

Company Comment 5:

The parametric monitoring of the Rotoclone is specified as a pressure drop of 1" – 6" of water. PQ Corporation requests parametric monitoring of "water flow" or "no flow". At this time we are not sure what the optimum water flow will be for our operating conditions. We will be working with the vendor after start up to determine what those operating conditions are.

IDEM Response:

The parametric monitoring requirements for the rotoclone in Condition D.2.7 have been updated as follows:

D.2.7 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the ~~latest stack test~~ **most recent valid compliance demonstration**, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit.

(b) The Permittee shall record the flow rate across the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the flow rate across the rotoclone is below ~~the minimum flow rate (in~~ **4.0** gallons per minute (GPM)~~)~~**, or the minimum flow rate** established during the ~~latest stack test~~ **most recent valid compliance demonstration**, the Permittee shall take reasonable response steps. A flow rate that is below the above mentioned minimum is not a deviation from this permit.

(c) ...

~~(b)~~**(d)** ...

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Permit Modification No. 019-29779-00018 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD)
for a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	PQ Corporation
Source Location:	7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
County:	Clark
SIC Code:	2819
Operation Permit Renewal No.:	T 019-23178-00018
Issuance Date:	September 4, 2008
Significant Permit Modification No.:	019-29779-00018
Permit Reviewer:	Kimberly Cottrell

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T 019-23178-00018 on September 4, 2008. The source has not received any other approvals.

County Attainment Status

The source is located in Clark County.

Table 1: County Attainment Status

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Basic nonattainment designation effective federally April 5, 2005, for $PM_{2.5}$.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Clark 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) $PM_{2.5}$
Clark County has been classified as nonattainment for $PM_{2.5}$ in 70 FR 943 dated January 5, 2005. On May 8th, 2008, U.S. EPA promulgated specific New Source Review rules for $PM_{2.5}$ emissions, and the effective date of these rules was July 15th, 2008. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Clark County has been classified as attainment or unclassifiable for PM_{10}, SO_2, NO_2, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Since this source is classified as a chemical process plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(e) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset 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:

Table 2: Source Status PTE

Pollutant	**Emissions** (ton/yr)
CO	15.18
NO_X	120.45
PM	2,470.6
PM_{10}	2,470.4
SO_2	177.93
VOC	3.61
Benzene	3.219E-04
Dichlorobenzene	1.840E-04
Formaldehyde	1.150E-02
Hexane	2.759E-01
Toluene	5.212E-04
Lead	1.38E-03
Cadmium	4.60E-04
Chromium	4.60E-04
Manganese	9.20E-04
Nickel	4.60E-04
Arsenic	6.13E-04
Beryllium	4.60E-04
Mercury	4.60E-04
Selenium	2.30E-03
Total HAP	2.96E-01

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant 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(gg)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

(c) These emissions are based upon Part 70 Operating Permit Renewal No. T 019-23178-00018,issued on September 4, 2008.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by PQ Corporation on October 3, 2010, relating to installation of a rotoclone for particulate control on the existing sodium silicate storage silo. The following is a list of the modified emission unit:

> Sodium silicate storage and transfer facilities, with a maximum of material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo equipped with a rotoclone and a baghouse with no unit identification for either particulate control device exhausting at stack S-12.

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

There are no new or modified stacks due to this modification.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document.

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.

Table 3: PTE Change of the Modified Process			
Pollutant	**PTE Before Modification** (ton/yr)	**PTE After Modification** (ton/yr)	**Increase from Modification** (ton/yr)
CO	0	0	0
NO_X	0	0	0
PM	66.33	26.46	0
PM_{10}	64.60	25.88	0
$PM_{2.5}$	64.08	25.70	0
SO_2	0	0	0
VOC	0	0	0
HAPs	0	0	0

This 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 it involves case-by-case determination of emission limitations and requires significant changes to existing monitoring and record keeping requirements.

Federal Rule Applicability Determination

There are no changes to Federal Rule Applicability as a result of this modification.

State Rule Applicability Determination

There are no changes to State Rule Applicability as a result of this modification.

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 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.

Compliance Determination Requirements
The compliance determination requirements applicable to this modification are as follows:

Table 4: Summary of Testing Requirements					
Emission Unit	**Control Device**	**Requirement**	**Frequency**	**Parameter**	**Reason**
storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate	Rotoclone	within 180 days of operation	one time	Flow Rate across rotoclone	Establish minimum flow rate in gallons per minute (GPM)

This testing is necessary to establish the minimum flow rate that will ensure compliance with the PSD Minor Limits pursuant to 326 IAC 2-2.

Compliance Monitoring Requirements
The compliance monitoring requirements applicable to this modification are as follows:

Table 5: Summary of Compliance Monitoring Requirements				
Control Device	**Parameter**	**Frequency**	**Range**	**Excursions and Exceedances**
Rotoclone	Visible emission notations	Daily	Normal-Abnormal	Response steps
	Flow Rate	Daily	to be established	

These monitoring conditions are necessary because the rotoclone must operate properly to ensure compliance with the PSD Minor Limits pursuant to 326 IAC 2-2.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T 019-29779-00018. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change No. 1 The emission unit description for sodium silicate storage and transfer facilities has been updated in Condition A.2(d)(2) and Section D.2(d)(2) as follows:

(d)(2) Sodium silicate storage and transfer facilities, with a maximum of material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo equipped with a **rotoclone and a** baghouse with no unit identification for **either** particulate control **device** exhausting at stack S-12.

Change No. 2 The "PSD Minor Limit" in Condition D.2.1 has been revised as follows:

D.2.1 PSD Minor Limit [326 IAC 2-2]

The ~~permitee~~ **Permittee** shall be subject to the following PM and PM_{10} limitations:

Unit	**PM Limit** (lbs/hr)	**PM_{10} Limit** (lbs/hr)
S-3 Baghouse	~~2.64~~**1.06**	~~2.64~~**1.06**
S-12 Baghouse	~~2.64~~**1.06**	~~2.64~~**1.06**
S-8 Baghouse	~~3.29~~**1.32**	~~3.29~~**1.32**
S-7 Baghouse	~~3.29~~**1.32**	~~3.29~~**1.32**

S-6 Baghouse	~~1.38~~**0.55**	~~1.38~~**0.55**
S-11 Baghouse	~~1.38~~**0.55**	~~1.38~~**0.55**

Compliance with these PM and PM_{10} emission limits from the storage and handling facilities, in conjunction with the total potential to emit of PM and PM_{10} from the rest of the source **including emissions from material handling, paved roads, and unpaved roads**, shall ensure that the source-wide PM and PM_{10} emissions are less than one hundred (100) tons per twelve consecutive month period, rendering the requirements of 326 IAC 2-2 not applicable.

Change No. 3 Several of IDEM's Branches and sections have been renamed. Therefore, IDEM has updated the addresses and contact information listed in the permit. References to "Permit Administration and Development Section" and the "Permits Branch" have been changed to "Permit Administration and Support Section". References to "Asbestos Section", "Compliance Data Section", "Air Compliance Section", "Compliance Section", and "Compliance Branch" have been changed to "Compliance and Enforcement Branch".

Change No. 4 IDEM has removed the mailing address from Condition A.1 and the reporting forms.

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 sodium silicate and sodium aluminosilicate manufacturing facility.

Source Address:	7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
~~Mailing Address:~~	~~P.O Box 669, Jeffersonville, Indiana 47131~~
General Source Phone Number:	(812) 288- 7186
SIC Code:	2819
County Location:	Clark
Source Location Status:	Nonattainment for $PM_{2.5}$ standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

Reporting Forms:

Source Name:	PQ Corporation
Source Address:	7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
~~Mailing Address:~~	~~P.O Box 669, Jeffersonville, Indiana 47131~~
Part 70 Permit No.:	T019-23178-00018

Change No. 5 "Permit Term" has been clarified as follows:

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,~~ **The Part 70 Operating Permit Renewal, T**019-23178-00018, is issued for a fixed term of five (5) years from the issuance 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) ...

Change No. 6 There may be times when it is unnecessary for a responsible official to "certify" additional information requested by IDEM; therefore, paragraph (a) of Condition B.7, "Duty to Provide Information" is revised as follows:

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(34).~~ Upon request, the Permittee shall also furnish to IDEM, OAQ**,** copies of records required to be kept by this permit.

(b) ...

Change No. 7 "Certification" is revised as follows:

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~~**A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:**

(i) **it contains a** certification by ~~the~~ **a** "responsible official" ~~of truth, accuracy~~**as defined by 326 IAC 2-7-1(34)**, and ~~completeness. This~~

(ii) **the** certification ~~shall state~~**states** 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 Permittee may use** 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(34).

Change No. 8 "Preventive Maintenance Plan" requirements have been clarified as follows:

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

(a) **A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:**

(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.**

The Permittee shall implement the PMPs.

(~~a~~**b**) If required by specific condition(s) in Section D of this permit, **where no PMP was previously required,** the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) ~~within~~**no later than** ninety (90) days after issuance of this permit **or ninety (90) days after initial start-up, whichever is later**, including the following information on each facility:

(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.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date 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

The PMP extension notification does not require ~~the~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ **a** "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

(~~b~~**c**) 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~~**PMPs and their submittal** do not require ~~the~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(~~c~~**d**) 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.

Change No. 9 "Emergency Provisions" is updated as follows:

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

(a) ...

(b) …

(1) - (4) …

(5) …

The notification which shall be submitted by the Permittee does not require ~~the~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(6) ...

(c) - (g) ...

~~(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.~~

Change No. 10 IDEM has removed Condition B.15 "Deviations from Permit Requirements and Conditions" as shown below. These requirements have been moved to the General Reporting Requirements in Section C of the permit.

~~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 probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:~~

~~Indiana Department of Environmental Management~~
~~Compliance Date 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. 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(34).~~

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

Change No. 11 "Permit Renewal" is clarified as follows:

B.~~17~~**16** 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**,** 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~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

…

(b) …

(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**, pursuant to 326 IAC 2-7-4(a)(2)(D),** in writing by IDEM, OAQ**,** any additional information identified as being needed to process the application.

Change No. 12 "Permit Amendment or Modification" is clarified as follows:

B.~~18~~**17** Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) ...

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

Indiana Department of Environmental Management
~~Permits Branch~~**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~~**does require a certification that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ **a** "responsible official" as defined by 326 IAC 2-7-1(34).

(c) ...

Change No. 13 "Permit Revision Under Economic Incentives and Other Programs" is clarified as follows:

B.~~19~~**18** 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 **or notice** 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) ...

Change No. 14 "Transfer of Ownership or Operational Control" is clarified as follows:

B.~~23~~**22** Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) ...

(b) …

~~The~~ **Any such** application ~~which shall be submitted by the Permittee~~ does require ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(c) …

Change No. 15 "Opacity" is clarified as follows:

C.1 Opacity [326 IAC 5-1]

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

(a) - (b) ...

Change No. 16 "Incineration" is clarified as follows:

C.3 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~~**or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in** 326 IAC 9-1-2 **or in this permit**.

Change No. 17 "Performance Testing" is clarified as follows:

C.7 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~~ **For performance testing required by this permit, a** test protocol, except as provided elsewhere in this permit, shall be submitted 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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(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 **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(c) ...

Change No. 18 "Compliance Monitoring" is clarified as follows:

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, **for** all monitoring ~~and record keeping~~ requirements not already legally required**, the Permittee** shall be ~~implemented within~~**allowed up to** ninety (90) days **from the date** of permit issuance or ~~ninety (90) days~~ of initial start-up, whichever is later~~. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required~~**, to begin such** monitoring ~~related to that equipment~~. If due to circumstances beyond ~~its~~**the Permittee's** control, ~~that equipment~~**any monitoring equipment required by this permit** cannot be installed and operated ~~within~~**no later than** ninety (90) days **after permit issuance or the date of initial startup, whichever is later**, 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~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

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.

Change No. 19 The general requirements for "Monitoring Methods" (Condition C.10) were removed from the permit as follows (This provision will be included as needed in Section D of the permit.)

~~C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]~~

~~Any monitoring or testing required by Section D 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.~~

Change No. 20 "Emergency Reduction Plans" is clarified as follows:

C.~~12~~**11** 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~~ **shall maintain the most recently** submitted written emergency reduction plans (ERPs) consistent with safe operating procedures ~~on June 4, 2002.~~

(b) ...

Change No. 21 "Response to Excursions or Exceedances" is clarified as follows:

C.~~14~~**13** Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

~~(a)~~ Upon detecting an excursion **where a response step is required by the D Section** or **an** exceedance~~, the~~ **of a limitation in this permit:**

(a) **The** Permittee shall **take reasonable response steps to** 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 **excess** 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~~**. The response** may include, but ~~are~~**is** not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned **or are returning** to normal without operator action (such as through response by a computerized distribution 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~~**normal** or ~~standard, as applicable~~**usual manner of operation**.

(c) - (d) ...

(e) The Permittee shall ~~maintain~~**record** the ~~following records:~~**reasonable response steps taken.**

~~(1) monitoring data;~~

~~(2) monitor performance data, if applicable; and~~

~~(3) corrective actions taken.~~

Change No. 22 "Actions Related to Noncompliance Demonstrated by a Stack Test" is clarified as follows:

C.~~15~~**14** 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~~**its** response actions to IDEM, OAQ, ~~within thirty (30~~**no later than seventy-five (75**) days ~~of receipt~~**after the date** 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~~**no later than** one hundred ~~twenty (120~~**eighty (180**) days ~~of receipt of~~**after** the ~~original~~**date of the** test ~~results~~. Should the Permittee demonstrate to IDEM, OAQ**,** that retesting in one hundred ~~twenty (120~~**eighty (180**) 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~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 23 "Emission Statement" is clarified as follows:

C.~~16~~**15** 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~~**a**) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(~~2~~**b**) 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.

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~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the "~~**a "**responsible official~~"~~**"** as defined by 326 IAC 2-7-1(34).

~~(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.~~

Change No. 24 "General Record Keeping Requirements" is clarified as follows:

C.~~17~~**16** General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] **[326 IAC 2-2] [326 IAC 2-3]**

(a) ...

(b) Unless otherwise specified in this permit, **for** all record keeping requirements not already legally required**, the Permittee** shall be ~~implemented within~~**allowed up to** ninety (90) days **from the date** of permit issuance **or the date of initial start-up, whichever is later, to begin such record keeping**.

(c) - (d) ...

Change No. 25 "General Reporting Requirements" is clarified as follows:

C.~~18~~**17** General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] **[326 IAC 2-2] [326 IAC 2-3]**

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported~~.~~ **except that 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.** This report shall be submitted ~~within~~**not later than** thirty (30) days ~~of~~ **after** the end of the reporting period.~~-~~ The Quarterly Deviation and Compliance Monitoring Report shall include ~~the~~**a** certification ~~by~~ **that meets** the **requirements of 326 IAC 2-7-6(1) by a** "responsible official" as defined by 326 IAC 2-7-1(34). **A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.**

(b) ~~The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:~~**The address for report submittal is:**

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

(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 Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(e)~~ **The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, 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~~**e**) ...

(~~g~~**f**) ...

Change No. 26 "Compliance with 40 CFR 82 and 326 IAC 22-1" is clarified as follows:

C.~~19~~**18** 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~~**applicable** 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~~.

Change No. 27 IDEM has updated the language in Section D.1 of the permit as follows:

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each facility and its control device.~~**A Preventive Maintenance Plan (PMP) is required for each facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.**

~~D.1.11 Testing Requirements [326 IAC 2-7-6(1),(6)]~~

~~During the period between 60 and 180 days after initial usage of biodiesel as a fuel in boiler SG-1001 or SG-1002, the Permittee shall perform a one time stack test, to verify the NO_x and SO_2 emission factors used to determine the potential emissions from one of the boilers while combusting biodiesel, utilizing methods as approved by the Commissioner.~~

D.1.8 Testing Requirements [326 IAC 2-7-6(1),(6)]

During the period between 60 and 180 days after initial usage of biodiesel as a fuel in boiler SG-1001 or SG-1002, the Permittee shall perform a one time stack test, to verify the NO_x and SO_2 emission factors used to determine the potential emissions from one of the boilers while combusting biodiesel, utilizing methods as approved by the Commissioner. Section C – Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

D.1.11 Visible Emissions Notations

(a) - (d) ...

~~(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Observation of abnormal emissions that do not violate 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.

D.1.12 Record Keeping Requirements

(a) - (b) ...

(c) ~~All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~**Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.**

D.1.13 Reporting Requirements for Nitrogen Oxides (NO_X)

A quarterly summary of the information to document **the** compliance **status** with Condition D.1.4 shall be submitted ~~to the address listed in Section C - General Reporting Requirements,~~ using the quarterly reporting form located at the end of this permit, or its equivalent, ~~within~~ **no later than** thirty (30) days after the end of each quarter being reported. **Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.** The report submitted by the Permittee requires ~~the~~ **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~ **a** "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 28 IDEM has updated the language in Section D.2 of the permit as follows:

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each facility and its control device.~~**A Preventive Maintenance Plan (PMP) is required for each facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.**

D.2.4 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Condition D.2.1 and D.2.3, the baghouses (exhausting to Stacks S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11 and S-12) for PM and PM_{10} control shall be in operation and control emissions from the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate at all times that the sodium silicate or sodium aluminosilicate production facilities are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

(a) ~~Within 180 days after issuance of this permit T019-23178-00018, in~~ **In** order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-7 or S-8 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. ~~Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing~~.

(b) Within five years of performing PM and PM_{10} testing for the S-7 or S-8 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-6 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. ~~Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing~~.

(c) Within five years of performing PM and PM_{10} testing for the S-6 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-3 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. ~~Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing~~.

(d) Within five years of performing PM and PM_{10} testing for the S-3 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} testing for the S-11 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. ~~Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing~~.

(e) Within one hundred eighty (180) days of operation of the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, in order to demonstrate compliance with Condition D.2.1, the Permittee shall performing testing to establish the a minimum flow rate (in gallons per minute (GPM)) across the rotoclone.

Section C – Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

D.2.6 Visible Emissions Notations

(a) - (d) ...

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps ~~in accordance with Section C - Response to Excursions or Exceedances~~. **Observation of abnormal emissions that do 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. **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.**

D.2.7 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps ~~in accordance with Section C- Response to Excursions and Exceedances~~. A pressure reading that is outside the above mentioned range is not a deviation from this permit.

(b) **The Permittee shall record the flow rate across the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the flow rate across the rotoclone is below the minimum flow rate (in gallons per minute (GPM)) established during the latest stack test, the Permittee shall take reasonable response steps. A flow rate that is below the above mentioned minimum is not a deviation from this permit.**

(c) Failure to take response steps ~~in accordance with Section C - Response to Excursions and Exceedances,~~ 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.**

~~(b)~~**(d)** The ~~instrument~~ **instruments** used for determining the pressure **and flow rate** shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.9 Record Keeping Requirements

(a) ...

(b) To document compliance with Condition D.2.7, the Permittee shall maintain records once per day of the pressure drop **across the rotoclone and baghouses used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate**. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day.)

(c) ~~All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~ **Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.**

Change No. 29 IDEM has revised the way that NSPS requirements are incorporated into the permit. Section E.1 has been revised to list the applicable portions of the NSPS. The full text of the NSPS requirements is included as *an* attachment to the permit. The revisions are as follows:

SECTION E.1 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements

Emission Unit Description:

(a) Two (2) fire tube boilers (SG-1001 and SG-1002), constructed in 1991, each rated at seventeen and five-tenths (17.5) million British thermal units (MMBtu) per hour and exhausting at one (1) stack, identified as S-2. The boilers are fired by natural gas, No. 2 fuel oil and No.4 fuel or biodiesel as a back up fuel.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

~~(a)~~ Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for boilers SG-1001 and SG-1002, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

~~(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:~~

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

E.1.2 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units, which are incorporated by reference as 326 IAC 12, **and included as Attachment A,** for boilers SG-1001 and SG-1002 as specified as follows:

(a) 40 CFR 60.40c
(b) 40 CFR 60.41c
(c) 40 CFR 60.42c (d), (h)(1), (2), (i), (j)
(d) 40 CFR 60.43c (d), (e)
(e) 40 CFR 60.44c
(f) 40 CFR 60.45c
(g) 40 CFR 60.46c
(h) 40 CFR 60.47c
(i) 40 CFR 60.48c
(j) 40 CFR 60.48c

~~***Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Dc]***~~

~~**Title 40: Protection of Environment**~~
~~PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES~~

~~***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).***~~

~~(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.~~

~~(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).~~

~~(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).~~

~~(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_2removal 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 $\%R_g$($\%R_g$o) is computed from E_{ao}o from paragraph (e)(1) of this section and an adjusted average SO_2inlet rate (E_{ai}o) using the following formula:~~

$$\%R_g o = 100\left(1 - \frac{E^{\circ}_{ao}}{E^{\circ}_{ai}}\right)$$

~~Where:~~

~~$\%R_g$o = Adjusted $\%R_g$, in percent;~~

~~E_{ao}o = Adjusted E_{ao}, ng/J (lb/MMBtu); and~~

~~E_{ai}o = Adjusted average SO_2inlet rate, ng/J (lb/MMBtu).~~

~~(ii) To compute E_{ai}o, an adjusted hourly SO_2inlet 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_2inlet rate, ng/J (lb/MMBtu);~~

~~E_w= SO_2concentration 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_2standards 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_2standards 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_2emissions 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_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.~~

~~(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_2or CO_2concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2control 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_2concentrations and either O_2or CO_2concentrations at both the inlet and outlet of the SO_2control 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_2emission 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_2emission 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_2CEMS at the inlet to the SO_2control device shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted, and the span value of the SO_2CEMS at the outlet from the SO_2control device shall be 50 percent of the maximum estimated hourly potential SO_2emission 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_2CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.~~

~~(d) As an alternative to operating a CEMS at the inlet to the SO_2control device (or outlet of the steam generating unit if no SO_2control 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_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission 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_2input 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_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 §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_2standards 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_2or 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_2emissions. 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_2emission 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_2emission 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_2emission 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_2emission 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_2emission 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_2or 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 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_2standard, 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_2standard, 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.~~

Change No. 30 The Emergency Occurrence Report has been updated as follows:

EMERGENCY OCCURRENCE REPORT

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

- The Permittee must notify the Office of Air Quality (OAQ), ~~within~~ **no later than** four (**4**) **daytime** business hours (1-800-451-6027 or 317-233-0178, ask for Compliance ~~Section~~ **and Enforcement Branch**); and
- The Permittee must submit notice in writing or by facsimile ~~within~~ **no later than** two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

~~A certification is not required for this report.~~

Change No. 31 The Semi-Annual Natural Gas Fired Boiler Certification has been removed from the permit.

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~COMPLIANCE AND ENFORCEMENT BRANCH~~

~~PART 70 OPERATING PERMIT~~
~~SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION~~

~~Source Name: PQ Corporation~~
~~Source Address: 7th Street and Missouri Avenue, Jeffersonville, Indiana 47130~~
~~Part 70 Permit No.: T019-23178-00018~~

~~☐ Natural Gas Only~~ ~~☐ Alternate Fuel burned~~ ~~From: _____ To: _____~~

~~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:~~

Change No. 32 The Quarterly Deviation and Compliance Monitoring Report has been updated as follows:

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

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".

~~Attach a signed certification to complete this report.~~

Recommendation and Conclusion

The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 019-29779-00018.

(1) Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that the Significant Permit Modification No. 019-29779-00018 be approved.

(2) A copy of the preliminary findings is also available on the Internet at: www.in.gov/idem/permits/air/pending.html.

(3) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem/permits/guide/.

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Permit Modification No. 019-29779-00018 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Appendix A – Emission Calculations
Technical Support Document (TSD)
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Company Name:	PQ Corporation
Address City IN Zip:	7th Street and Missouri Avenue, Jeffersonville, IN 47130
County:	Clark
SIC / NAICS Code:	2819 325188
Part 70 Operating Permit No.:	T 019-23178-00018
Issuance Date:	September 4, 2008
Significant Permit Modification No.:	019-29779-00018
Permit Reviewer:	Kimberly Cottrell
Date:	March 18, 2011

Summary of Potential to Emit

The tables below summarize the potential to emit calculations submitted by PQ Corporation. The subsequent pages of this document contain the calculations provided by PQ Corporation. IDEM has reviewed these calculations and verified their accuracy.

	Potential To Emit Prior to the Modification (ton/yr)						
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**
Material Processing	0	0	0.005	0.005	0.005	0	0
Unpaved Roads	0	0	2.153	0.549	0.055	0	0
Paved Roads	0	0	0.154	0.030	0.004	0	0
Baghouse Emission Limits	0	0	64.02	64.02	64.02	0	0
Totals:	0	0	66.33	64.60	64.08	0	0

	Limited Potential To Emit After the Modification (ton/yr)						
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**
Material Processing	0	0	0.005	0.005	0.005	0	0
Unpaved Roads	0	0	0.708	0.180	0.018	0	0
Paved Roads	0	0	0.070	0.014	0.002	0	0
Baghouse Emission Limits	0	0	25.68	25.68	25.68	0	0
Totals:	0	0	26.46	25.88	25.70	0	0

	Increase in Potential To Emit due to this Modification (ton/yr)						
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**
Totals:	**0**	**0**	**(39.87)**	**(38.72)**	**(38.38)**	**0**	**0**

Material Processing

Amount of Material Unloaded (tons/yr)	EF (lb/ton)	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)
186,242	0.00005	0.00466	0.00466	0.00466

Methodology

EF = Emission Factor for truch unloading of crushed stone, EPAs AP-42, Table 11.19.2-2.

PM is assumed to be equal to PM_{10}

$PM_{2.5}$ is assumed to be equal to PM_{10}

Emissions (tons/yr) = Amount of material loaded (tons/yr) x EF (lb/ton) / 2000 (lb/ton)

Unpaved Roads

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Vehicle Type	Max. Material Handling Throughput, tpy	Bulk Density of Solid Material, lbs/cubic yard	Capacity of Truck, cubic yards	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)	Notes
Sand Truck, Full	19,032	2673	129.5	17	23	40	827	33,098	500	0.095	78.4	Total weight of the truck cannot exceed 40 tons.
Sand Truck, Empty				17	0	17	827	14,067	500	0.095	78.4	
Sodium Silicate Truck, Full	22,070	864	129.5	17	23	40	960	38,382	500	0.095	90.9	Total weight of the truck cannot exceed 40 tons.
Sodium Silicate Truck, Empty				17	0	17	960	16,313	500	0.095	90.9	
Sodium Silicate Tanker Truck (6000 gal), Full	20,000			12	26	38	769	29,231	500	0.095	72.8	Total weight of the truck cannot exceed 40 tons.
Sodium Silicate Tanker Truck (6000 gal), Empty				12	0	12	769	9,231	500	0.095	72.8	
Tanker truck (6000 gal), Full				12	0	12		0		0	0	
Tanker truck (6000 gal), Empty				12	0	12		0		0	0	
Front-end loader (3 CY), Full				15	0	15		0		0	0	
Front-end loader (3 CY), Empty				15	0	15		0		0	0	
Soda Ash Truck, Full	15,766	1458	129.5	17	23	40	685	27,419	500	0.095	64.9	Total weight of the truck cannot exceed 40 tons.
Soda Ash Truck, Empty				17	0	17	685	11,653	500	0.095	64.9	
Total							**6483**	**179,393**			**614.0**	

Average Vehicle Weight Per Trip = 27.7 tons/trip
Average Miles Per Trip = 0.095 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM_{10}	$PM_{2.5}$	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	27.7	27.7	27.7	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM_{10}	$PM_{2.5}$	
Unmitigated Emission Factor, Ef =	7.01	1.79	0.18	lb/mile
Mitigated Emission Factor, Eext =	4.61	1.18	0.12	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM_{10} (tons/yr)	Unmitigated PTE of $PM_{2.5}$ (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM_{10} (tons/yr)	Mitigated PTE of $PM_{2.5}$ (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM_{10} (tons/yr)	Controlled PTE of $PM_{2.5}$ (tons/yr)
Sand Dump truck (16 CY), Full	0.275	0.070	0.007	0.181	0.046	0.005	0.090	0.023	0.002
Sand Dump truck (16 CY), Empty	0.275	0.070	0.007	0.181	0.046	0.005	0.090	0.023	0.002
Sodium Silicate Dump truck (16 CY), Full	0.319	0.081	0.008	0.209	0.053	0.005	0.105	0.027	0.003
Sodium Silicate Dump truck (16 CY), Empty	0.319	0.081	0.008	0.209	0.053	0.005	0.105	0.027	0.003
Tanker truck (6000 gal), Full	0.255	0.065	0.007	0.168	0.043	0.004	0.084	0.021	0.002
Tanker truck (6000 gal), Empty	0.255	0.065	0.007	0.168	0.043	0.004	0.084	0.021	0.002
Tanker truck (6000 gal), Full	0	0	0	0	0	0	0	0	0
Tanker truck (6000 gal), Empty	0	0	0	0	0	0	0	0	0
Front-end loader (3 CY), Full	0	0	0	0	0	0	0	0	0
Front-end loader (3 CY), Empty	0	0	0	0	0	0	0	0	0
Soda Ash Dump truck (16 CY), Full	0.228	0.058	0.006	0.150	0.038	0.004	0.075	0.019	0.002
Soda Ash Dump truck (16 CY), Empty	0.228	0.058	0.006	0.150	0.038	0.004	0.075	0.019	0.002
Totals	**2.153**	**0.549**	**0.055**	**1.415**	**0.361**	**0.036**	**0.708**	**0.180**	**0.018**

Methodology

Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
PM_{10} = Particulate Matter (<10 um)
$PM_{2.5}$ = Particulate Matter (<2.5 um)
$PM_{2.5}$ = PM_{10}
PTE = Potential to Emit

Paved Roads

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Type	Max. Material Handling Throughput, tpy	Bulk Density of Solid Material, lbs/cubic yard	Capacity of Truck, cubic yards	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)	Notes
Sand Truck, Full	19,032	2673	129.5	17	23	40	827	33,098	300	0.057	47.0	Total weight of the truck cannot exceed 40 tons.
Sand Truck, Empty				17	0	17	827	14,067	300	0.057	47.0	
Sodium Silicate Truck, Full	22,070	864	129.5	17	23	40	960	38,382	300	0.057	54.5	Total weight of the truck cannot exceed 40 tons.
Sodium Silicate Truck, Empty				17	0	17	960	16,313	300	0.057	54.5	
Sodium Silicate Tanker Truck (6000 gal), Full				12	26	38			300	0.057	0	Total weight of the truck cannot exceed 40 tons.
Sodium Silicate Tanker Truck (6000 gal), Empty				12	0	12			300	0.057	0	
Tanker truck (6000 gal), Full				12	0	12			0	0	0	
Tanker truck (6000 gal), Empty				12	0	12			0	0	0	
Front-end loader (3 CY), Full				15	0	15			0	0	0	
Front-end loader (3 CY), Empty				15	0	15			0	0	0	
Soda Ash Truck, Full	15,766	1458	129.5	17	23	40	685	27,419	300	0.057	38.9	Total weight of the truck cannot exceed 40 tons.
Soda Ash Truck, Empty				17	0	17	685	11,653	300	0.057	38.9	
					Total		**4945**	**140,932**			**280.96**	

Average Vehicle Weight Per Trip = 28.5 tons/trip
Average Miles Per Trip = 0.057 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^0.65 * (W/3)^1.5 - C] (Equation 1 from AP-42 13.2.1)

	PM	PM_{10}	$PM_{2.5}$	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	28.5	28.5	28.5	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM_{10}	$PM_{2.5}$	
Unmitigated Emission Factor, Ef =	1.10	0.21	0.03	lb/mile
Mitigated Emission Factor, Eext =	1.00	0.20	0.03	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM_{10} (tons/yr)	Unmitigated PTE of $PM_{2.5}$ (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM_{10} (tons/yr)	Mitigated PTE of $PM_{2.5}$ (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM_{10} (tons/yr)	Controlled PTE of $PM_{2.5}$ (tons/yr)
Sand Dump truck (16 CY), Full	0.0258	0.0050	0.0007	0.0236	0.0046	0.0007	0.0118	0.0023	0.0003
Sand Dump truck (16 CY), Empty	0.0258	0.0050	0.0007	0.0236	0.0046	0.0007	0.0118	0.0023	0.0003
Sodium Silicate Dump truck (16 CY), Full	0.0299	0.0058	0.0009	0.0274	0.0053	0.0008	0.0137	0.0027	0.0004
Sodium Silicate Dump truck (16 CY), Empty	0.0299	0.0058	0.0009	0.0274	0.0053	0.0008	0.0137	0.0027	0.0004
Tanker truck (6000 gal), Full	0	0	0	0	0	0	0	0	0
Tanker truck (6000 gal), Empty	0	0	0	0	0	0	0	0	0
Tanker truck (6000 gal), Full	0	0	0	0	0	0	0	0	0
Tanker truck (6000 gal), Empty	0	0	0	0	0	0	0	0	0
Front-end loader (3 CY), Full	0	0	0	0	0	0	0	0	0
Front-end loader (3 CY), Empty	0	0	0	0	0	0	0	0	0
Soda Ash Dump truck (16 CY), Full	0.0214	0.0042	0.0006	0.0195	0.0038	0.0006	0.0098	0.0019	0.0003
Soda Ash Dump truck (16 CY), Empty	0.0214	0.0042	0.0006	0.0195	0.0038	0.0006	0.0098	0.0019	0.0003
Totals	**0.1542**	**0.0300**	**0.0045**	**0.1410**	**0.0275**	**0.0041**	**0.0705**	**0.0137**	**0.0020**

Methodology

Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
PM_{10} = Particulate Matter (<10 um)
$PM_{2.5}$ = Particulate Matter (<2.5 um)
$PM_{2.5}$ = PM_{10}
PTE = Potential to Emit

Baghouse Emission Limits

Emission Points	Current Permitted Limits, PM/PM-10		Uncontrolled Emissions, PM/PM_{10}		Proposed Emission Limits, PM/PM_{10}		Notes
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	
S-3 Baghouse	2.64	11.56	105.60	462.53	1.06	4.64	The uncontrolled emissions were calculated from the current permitted limits assuming a control efficiency of 97.5% for the baghouses.
S-12 Baghouse	2.64	11.56	105.60	462.53	1.06	4.64	The proposed emission limits were calculated using the uncontrolled emission limits and assuming a 99% control efficiency for the baghouses.
S-8 Baghouse	3.29	14.41	131.60	576.41	1.32	5.78	
S-7 Baghouse	3.29	14.41	131.60	576.41	1.32	5.78	
S-6 Baghouse	1.38	6.04	55.20	241.78	0.55	2.42	
S-11 Baghouse	1.38	6.04	55.20	241.78	0.55	2.42	
Sub-Total =	**14.62**	**64.02**	**584.80**	**2561.44**	**5.86**	**25.68**	

	Controlled PTE of PM, tons/yr	Controlled PTE of PM_{10}, tons/yr	Controlled PTE of $PM_{2.5}$, tons/yr
Handling	0.005	0.005	0
Unpaved Roads	0.710	0.180	0.020
Paved Roads	0.070	0.010	0
SubTotal =	0.785	0.195	0.020

Proposed Emission Limit (tpy):	26.465	25.875	25.7
Proposed Emission Limit (lb/hr):	6.04	5.90	5.86