



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

TO: Interested Parties / Applicant

DATE: August 31, 2010

RE: Conopco, Inc. d/b/a Unilever HPC USA / 089-23372-00229

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Federally Enforceable State Operating Permit OFFICE OF AIR QUALITY

**Conopco, Inc. d/b/a Unilever HPC USA
1200 Calumet Avenue
Hammond, Indiana 46320**

(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. 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 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

Operation Permit No.: F 089-23372-00229	
Issued by:  Tripurari P. Sinha, PhD, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 31, 2010 Expiration Date: August 31, 2015

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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 2-8-3(b)]

The Permittee owns and operates a stationary soap manufacturing plant.

Source Address:	1200 Calumet Avenue, Hammond, Indiana 46320
General Source Phone Number:	219-659-3200
SIC Code:	2841
County Location:	Lake
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Rules Minor Source Under Nonattainment NSR Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) Boilers, identified as follows:

- (1) Babcock-Wilcox Boiler No. 4, identified as Unit No. 3, constructed in 1936, with a maximum capacity of 82.4 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 2.
- (2) American Hydrotherm Boiler No. 1, identified as Unit No. 16, constructed in 1985, with a maximum capacity of 12.22 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 18.
- (3) American Hydrotherm Boiler No. 2, identified as Unit No. 29, constructed February 22, 1989, with a maximum capacity of 12.22 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 1A.
- (4) Powerhouse Boiler No. 1, identified as Unit No. 49, constructed in 1995 with a maximum capacity of 98.3 MMBtu per hour, natural gas-fired, equipped with low NOx burners and flue gas recirculation, exhausting to Stack 1. [Under 40 CFR 60, Subpart Dc, Powerhouse Boiler No.1 is an affected facility.]

(b) Manufacturing Processes controlled by Dust Collector Systems, identified as follows:

South Side Emission Units - Building 15

- (1) Three (3) Soap Noodle Silos (Silos #1, #2 and #3), constructed in 1985, identified as Units 18, 19 and 20, each with a maximum throughput of 11,000 pounds of soap per hour, each silo has a melt system rework hopper (Hoppers #1, #2 and #3), connected by a common exhaust header and controlled by a maximum of two dust collectors identified as MPAC-2578 exhausting to Stack 28 and MPAC-2576 exhausting to Stack 29.
- (2) Three (3) Chip Mixers, constructed in 1985, identified as Chip Mixer No. 1, Chip Mixer No. 2, Chip Mixer No. 3, each with a maximum capacity of 5,480 pounds of soap per hour, controlled by aspiration filters #9663, #9664 and #9667, respectively, exhausting indoors only.
- (3) One (1) Chip Bagging Station, constructed in 1985, identified as Station #3, with a maximum capacity of 7,875 pounds of soap per hour, controlled by aspiration filter #9667, exhausting indoors only.

North Side Emission Units - Building 15A

- (1) Four (4) Soap Noodle Silos, constructed in 1985, identified as Noodle Silo #4, Noodle Silo #5, Noodle Silo #6 and Noodle Silo #7, constructed in 1985, identified as Unit 26, each with a maximum throughput of 11,000 pounds of soap per hour, connected by a common exhaust header and controlled by dust collectors as described below:
 - (A) Flex-Kleen dust collector (MPAC-1956), identified as Unit 34, constructed in 1990, modified in 2001 and 2008, serves Silo 4 and Melt System Rework Hopper #4. The dust collector exhausts through Stack 6A. For maintenance operations, Flex-Kleen dust collector MPAC-1947 or dust collector MPAC-2362 can be operated to serve Silo 4 and Melt System Rework Hopper #4.
 - (B) Flex-Kleen dust collector (MPAC-1947), identified as Unit 33, constructed in 1990, modified in 2001 and 2008, serves Silo 5 and Melt System Rework Hopper #5. The dust collector exhausts through Stack 5A. For maintenance operations, Flex-Kleen dust collector or dust collector MPAC-2362 can be operated to serve Silo 5 and Melt System Rework Hopper #5
 - (C) Flex-Kleen dust collector (MPAC-3566), identified as Unit 32, constructed in 1990, modified in 2001 and 2008, serves Silo 6 and Melt System Rework Hopper #6. The dust collector exhausts through Stack 4A. For maintenance operations, Flex-Kleen dust collector or dust collector MPC-2362 can be operated to serve Silo 6 and Melt System Rework Hopper #6.
 - (D) Flex-Kleen dust collector (MPAC-2574), identified as Unit 31,

constructed in 1990, modified in 2001 and 2008, serves Silo 7 and Melt System Rework Hopper #7. This dust collector exhausts through Stack 3A. For maintenance operations, Flex-Kleen dust collector or dust collector MPAC-2362 can be operated to serve Silo 7, the Transfer Silo, and Melt System Rework Hopper #7.

- (2) One (1) Soap Noodle Silo, identified as Transfer Silo and four (4) Rework Hoppers, identified as Rework Hopper #4, Rework Hopper #5, Rework Hopper #6 and Rework Hopper #7, constructed in 1990, each with a maximum capacity of 5,480 pounds per hour, connected to a common exhaust header and controlled by dust collectors as described below:
 - (A) Flex-Kleen dust collector (MPAC-2362), identified as Unit 36, constructed in 1990, modified in 2009, serves the Transfer Silo, Rework Hoppers #4, #5, #6, and #7. The dust collector exhausts through Stack 8A. For maintenance, dust collector MPAC-2362 can serve to replace the operations of one of the following dust collectors: MPAC-1956, MPAC-1947, MPAC-3566 or MPAC-2574
- (3) Four (4) Chip Mixers, constructed in 1985, identified as Chip Mixer No. 4, Chip Mixer No. 5, Chip Mixer No. 6 and Chip Mixer No. 7, each with a maximum capacity of 5,480 pounds of soap per hour, controlled by aspiration filters #9668, #9669, #9670 and #9671, respectively, exhausting indoors only.

Bagging Operation - Building 5

Soap Noodle Bagging Silo Dust Collector (DC-31613), constructed in 2003, located in Building 5, used to control soap dust from the transfer of soap noodles to silo TK-31610, with a maximum capacity of 11,000 tons per year, and exhausting to Stack 30.

(c) Manufacturing Processes controlled by wet scrubber systems:

- (1) DR Technologies Wet Scrubber/Demister Collection System "North Scrubber"
controlling four (4) liquid Drais mixers, two (2) reactors (constructed in 1990), a nitrogen blanket (serving reactors, strippers, and buffer tank), hotwells, identified as Unit 30. In case of a rupture disk failure, emissions from the knockout tanks H-30675 and H-30676 will also be controlled by this system. The system also includes four (4) melt tank vents for lines 4-7 for housekeeping purposes. The Scrubber/Demister system has a maximum capacity of 8,968 lbs/hr of fatty acid material and exhausts to Stack 2A.
- (2) Schneible Wet Scrubber/Demister Collection System "South Scrubber"
controlling three (3) liquid Drais mixers, two (2) reactors (constructed in 1985), a nitrogen blanket (serving reactors, strippers, and buffer tank), identified as Unit 17. In case of a rupture disk failure, emissions from knockout tanks H-30673, H-30674 and DEFI making are controlled by this system. This system also includes six (6) melt and hold tank vents for lines 1, 2, & 3 for housekeeping purposes. The Scrubber/Demister system has a maximum capacity of 5,736 lbs/hr of fatty acid material handled and exhausts to Stack 19.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) The following VOC and HAP storage containers subject to 326 IAC 8-3:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons. (Building 14 dye mixing tanks)
 - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids. [326 IAC 2-7-1(G)(iii)(AA)&(BB)]
- (b) Production related activities, including application of oils, greases, lubricants, and nonvolatile materials as temporary protective coatings; degreasing operations that do not exceed 145 gallons per 12 months; brazing, cutting torches, soldering and welding; and closed loop heating and cooling systems. [326 IAC 2-7-1(21)(G)(vi)(AA),(CC),(EE)&(FF)][326 IAC 8-3]
- (c) Cleaners and solvents, subject to 326 IAC 8-3, characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;
 - (2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months. [326 IAC 2-7-1(21)(G)(vi)(DD)]
- (d) Emergency generators as follows:
One (1) natural gas-fired Powerhouse Generator with a maximum capacity of 450 horsepower.
[326 IAC 2-7-1(21)(G)(xxii)(BB)] [Affected Facilities under 40 CFR 63, Subpart ZZZZ]
- (e) Two (2) laboratories. [326 IAC 2-7-1(21)(D)]
- (f) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour. [326 IAC 2-7-1(21)(G)(i)(BB)]
- (g) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons. [326 IAC 2-7-1(21)(G)(ii)(AA)]
- (h) Noncontact cooling tower systems with either of the following:
Natural draft cooling towers not regulated under a NESHAP.
Forced and induced draft cooling tower system not regulated under a NESHAP.
[326 IAC 2-7-1(G)(ix)(FF)]
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment. [326 IAC 2-7-1(21)(G)(x)(AA)]
- (j) Heat exchanger cleaning and repair. [326 IAC 2-7-1(G)(x)(BB)]

- (k) Paved and unpaved roads and parking lots with public access.
[326 IAC 2-7-1(21)(G)(xiii)]
- (l) Asbestos abatement projects regulated by 326 IAC 14-10.
[326 IAC 2-7-1(21)(G)(xvi)]
- (m) Routine maintenance and repair of buildings. [326 IAC 2-7-1(21)(G)(xvii)]
- (n) Flue gas conditioning systems and associated chemicals.
[326 IAC 2-7-1(21)(G)(xviii)]
- (o) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup. [326 IAC 2-7-1(21)(G)(xix)]
- (p) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower. [326 IAC 2-7-1(G)(xx)(AA)-(EE)]
- (q) On-site fire and emergency response training approved by the department.
[326 IAC 2-7-1(G)(xxii)(AA)]
- (r) Other emergency equipment as follows:
Stationary, diesel fire pumps and rental air compressor.
[326 IAC 2-7-1(21)(G)(xxii)(CC)]
- (s) Coalescer media changeout. [326 IAC 2-7-1(21)(G)(xxv)]

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, 089-23372-00229, 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, 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 2-8-6] [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 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(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 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

- (i) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
- (ii) 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) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

- (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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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 Northwest 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
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

- (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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 2-8-3(c)(6) 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 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) 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.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

- (a) All terms and conditions of permits established prior to 089-23372-00229 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 2-8-8(a)]
- (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 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

- (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 2-8-3. 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8 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 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) 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 approval required by 326 IAC 2-8-11.1 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 2-8-15(b) through (d). 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 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(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 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) 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.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than 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) 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.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][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 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
 - (1) The potential to emit volatile organic compounds (VOCs) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period;
 - (2) The potential to emit PM₁₀ and PM_{2.5} from the entire source, shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period;
- (b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 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 twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

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

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

C.6 Fugitive Particulate Matter Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) Material processing facilities shall include the following:
 - (1) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
 - (2) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
 - (3) The PM₁₀ stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
 - (4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.
 - (5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).
- (i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

- (j) Material transfer limits shall be as follows:
 - (1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
 - (2) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.
 - (3) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:
 - (A) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.
 - (B) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).
- (k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

C.7 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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.

Testing Requirements [326 IAC 2-8-4(3)]

C.8 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.9 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.11 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8]

- (a) Pursuant to 326 IAC 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.
- (b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy of any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, if required to IDEM, OAQ within thirty (30) days of the update.
- (c) Pursuant to 326 IAC 6.8-8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8.

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(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 2-8-4][326 IAC 2-8-5(a)(1)]

C.13 Risk Management Plan [326 IAC 2-8-4] [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.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.16 Emission Statement [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen or volatile organic compounds into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (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.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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) 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.

Stratospheric Ozone Protection

C.19 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:

Boilers, identified as follows:

- (a) Babcock-Wilcox Boiler No. 4, identified as Unit No. 3, constructed in 1936, with a maximum capacity of 82.4 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 2.
- (b) American Hydrotherm Boiler No. 1, identified as Unit No. 16, constructed in 1985, with a maximum capacity of 12.22 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 18.
- (c) American Hydrotherm Boiler No. 2, identified as Unit No. 29, constructed February 22, 1989, with a maximum capacity of 12.22 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 1A.
- (d) Powerhouse Boiler No. 1, identified as Unit No. 49, constructed in 1995 with a maximum capacity of 98.3 MMBtu per hour, natural gas-fired, equipped with low NOx burners and flue gas recirculation, exhausting to Stack 1. [Under 40 CFR 60, Subpart Dc, Powerhouse Boiler No.1 is an affected facility.]

(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 2-8-4(1)]

D.1.1 Particulate Matter Emissions for Lake County (PM10) [326 IAC 6.8-2-35]

Pursuant to 326 IAC 6.8-2-35, PM10 emissions shall not exceed the emission and operational limitations listed below:

- (a) PM10 emissions from the Babcock-Wilcox Boiler No. 4, identified as Unit No. 3, shall not exceed 0.116 lb/MMBtu or 18.88 lb/hr.
- (b) PM10 emissions from the American Hydrotherm Boiler No. 2, identified as Unit No. 29, shall not exceed 0.150 lb/MMBtu or 1.83 lb/hr.
- (c) American Hydrotherm Boiler No. 1 shall combust natural gas only.

D.1.2 Sulfur Dioxide Emission Limitations [326 IAC 7-4.1-19]

Pursuant to 326 IAC 7-4.1-19, the Permittee shall comply with the following emission limitations:

- (a) Babcock-Wilcox Boiler No. 4 shall be limited to one and fifty-two hundredths (1.52) lb SO₂ per MMBtu;
- (b) Powerhouse Boiler No. 1 shall be limited to five-tenths (0.5) lb SO₂ per MMBtu and forty nine and fifteen hundredths (49.15) pounds SO₂ per hour; and
- (c) American Hydrotherm Boiler No. 2 shall be limited to three-tenths (0.3) lb SO₂ per MMBtu and three and sixty-six hundredths (3.66) lb SO₂ per hour.

D.1.3 Particulate Matter Emissions for Lake County (PM10) [326 IAC 6.8]

Pursuant to 326 IAC 6.8-1-2(b)(3), particulate emissions (PM10) from the Powerhouse Boiler No. 1, identified as Unit 49, shall not exceed 0.01 grain per dry standard cubic foot.

D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for and each boiler. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Manufacturing Processes controlled by Dust Collector Systems, identified as follows:

South Side Emission Units - Building 15

- (a) Three (3) Soap Noodle Silos (Silos #1, #2 and #3), constructed in 1985, identified as Units 18, 19 and 20, each with a maximum throughput of 11,000 pounds of soap per hour, each silo has a melt system rework hopper (Hoppers #1, #2 and #3), connected by a common exhaust header and controlled by a maximum of two dust collectors identified as MPAC-2578 exhausting to Stack 28 and MPAC-2576 exhausting to Stack 29.
- (b) Three (3) Chip Mixers, constructed in 1985, identified as Chip Mixer No. 1, Chip Mixer No. 2, Chip Mixer No. 3, each with a maximum capacity of 5,480 pounds of soap per hour, controlled by aspiration filters #9663, #9664 and #9667, respectively, exhausting indoors only.
- (c) One (1) Chip Bagging Station, constructed in 1985, identified as Station #3, with a maximum capacity of 7,875 pounds of soap per hour, controlled by aspiration filter #9667, exhausting indoors only.

North Side Emission Units - Building 15A

- (a) Four (4) Soap Noodle Silos, constructed in 1985, identified as Noodle Silo #4, Noodle Silo #5, Noodle Silo #6 and Noodle Silo #7, constructed in 1985, identified as Unit 26, each with a maximum throughput of 11,000 pounds of soap per hour, connected by a common exhaust header and controlled by dust collectors as described below:
 - (1) Flex-Kleen dust collector (MPAC-1956), identified as Unit 34, constructed in 1990, modified in 2001 and 2008, serves Silo 4 and Melt System Rework Hopper #4. The dust collector exhausts through Stack 6A. For maintenance operations, Flex-Kleen dust collector MPAC-1947 or dust collector MPAC-2362 can be operated to serve Silo 4 and Melt System Rework Hopper #4.
 - (2) Flex-Kleen dust collector (MPAC-1947), identified as Unit 33, constructed in 1990, modified in 2001 and 2008, serves Silo 5 and Melt System Rework Hopper #5. The dust collector exhausts through Stack 5A. For maintenance operations, Flex-Kleen dust

collector or dust collector MPAC-2362 can be operated to serve Silo 5 and Melt System Rework Hopper #5

- (3) Flex-Kleen dust collector (MPAC-3566), identified as Unit 32, constructed in 1990, modified in 2001 and 2008, serves Silo 6 and Melt System Rework Hopper #6. The dust collector exhausts through Stack 4A. For maintenance operations, Flex-Kleen dust collector or dust collector MPAC-2362 can be operated to serve Silo 6 and Melt System Rework Hopper #6.
 - (4) Flex-Kleen dust collector (MPAC-2574), identified as Unit 31, constructed in 1990, modified in 2001 and 2008, serves Silo 7 and Melt System Rework Hopper #7. This dust collector exhausts through Stack 3A. For maintenance operations, Flex-Kleen dust collector or dust collector MPAC-2362 can be operated to serve Silo 7, the Transfer Silo, and Melt System Rework Hopper #7.
- (b) One (1) Soap Noodle Silo, identified as Transfer Silo and four (4) Rework Hoppers, identified as Rework Hopper #4, Rework Hopper #5, Rework Hopper #6 and Rework Hopper #7, constructed in 1990, each with a maximum capacity of 5,480 pounds per hour, connected to a common exhaust header and controlled by dust collectors as described below:
- (1) Flex-Kleen dust collector (MPAC-2362), identified as Unit 36, constructed in 1990, modified in 2009, serves the Transfer Silo, Rework Hoppers #4, #5, #6, and #7. The dust collector exhausts through Stack 8A. For maintenance, dust collector MPAC-2362 can serve to replace the operations of one of the following dust collectors: MPAC-1956, MPAC-1947, MPAC-3566 or MPAC-2574.
- (c) Four (4) Chip Mixers, constructed in 1985, identified as Chip Mixer No. 4, Chip Mixer No. 5, Chip Mixer No. 6 and Chip Mixer No. 7, each with a maximum capacity of 5,480 pounds of soap per hour, controlled by aspiration filters #9668, #9669, #9670 and #9671, respectively, exhausting indoors only.

Bagging Operation - Building 5

Soap Noodle Bagging Silo Dust Collector (DC-31613), constructed in 2003, located in Building 5, used to control soap dust from the transfer of soap noodles to silo TK-31610, with a maximum capacity of 11,000 tons per year, and exhausting to Stack 30.

(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 2-8-4(1)]

D.2.1 FESOP, PSD, and Nonattainment NSR Minor Limits [326 IAC 2-8] [326 IAC 2-2][326 IAC 2-7] [326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall comply with the following limits:

- (a) Combined PM10 emissions from Building 15 and Building 15A emission units shall not exceed 12.42 lbs/hr.
- (b) Combined PM2.5 emissions from Building 15 and Building 15A shall not exceed 12.42 lbs/hr.

Compliance with these limits and Conditions D.2.2, and D.3.1., combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) not applicable, and make this source a minor source under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review).

D.2.2 PSD [326 IAC 2-2]

The Permittee shall comply with the following emission limitations:

- (a) Combined PM emissions from Building 15 and Building 15A emission units shall not exceed 34.01 lbs/hr.

Compliance with this limit, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and make the source a minor source under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

D.2.3 Particulate Matter Emissions for Lake County (PM10) [326 IAC 6.8-2-35]

Pursuant to 326 IAC 6.8, PM10 emissions shall not exceed the emission limitations listed in the table below:

PM10 [326 IAC 6.8] – Building 15				
Emission Unit	Building Location	Stack ID	Emission Limits	
			(g/dscf)	(lb/hr)
Soap noodle bins numbers 1, 2 and 3 dust collection system	15	28 and 29	0.020	0.63 total
Chip Mixer No. 1, Chip Mixer No. 2 and Chip Mixer No. 3	15	---	0.020	0.720
Particulate Matter Limitations (PM10) [326 IAC 6.8] – Building 15A				
Emission Unit	Building Location	Stack ID	Emission Limits	
			(g/dscf)	(lb/hr)
Flex Kleen dust collection MPAC-2574, stack 3A, building 15A	15A	3A	0.020	0.940
Flex Kleen dust collection MPAC-3566, stack 4A, building 15A	15A	4A	0.020	0.940

PM10 [326 IAC 6.8] – Building 15				
Emission Unit	Building Location	Stack ID	Emission Limits	
			(g/dscf)	(lb/hr)
Flex Kleen dust collection MPAC-1947, stack 5A, building 15A	15A	5A	0.020	0.940
Flex Kleen dust collection MPAC-1956, stack 6A, building 15A	15A	6A	0.020	0.940
Flex Kleen dust collection MPAC-2362, stack 8A, building 15A	15A	8A	0.020	2.130
Particulate Matter Limitations (PM) [326 IAC 6.8] – Building 5				
Emission Unit	Building Location	Stack ID	Emission Limits	
			(g/dscf)	(lb/hr)
Soap Noodle Bagging Silo Dust Collector (DC-31613)	5	30	0.03	0.62

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.5 Particulate Matter Control

- (a) In order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, each control device shall be in operation and controlling emissions from the associated process at all times the associated process is in operation:

Control Device Requirements		
Emission Unit	Control Device	Stack Number
Three Soap Noodle Silos (Unit 18, 19, 20)	MPAC-2578 and/or MPAC-2576	28 and/or 29
Chip Bagging Station (Station #3)	aspiration filter #9667	indoors

Control Device Requirements		
Emission Unit	Control Device	Stack Number
Four Soap Noodle Silos (Unit 26)	MPAC-1956, MPAC-1947, MPAC-3566, MPAC-2362 and/or MPAC-2574	3A, 4A, 5A, 6A and/or 8A
Soap Noodle Silo TK-31610	DC-31613	30

- (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.2.6 Compliant Limits

In order to determine compliance with Condition D.2.3, the Permittee shall comply with the following limits:

Compliance Demonstration Method for Particulate Matter Limitations [326 IAC 6.8]			
Emission Unit	Stack ID	Emission Limits	
Building 15/15A emission units	Stack 3A, Stack 4A, Stack 5A, Stack 6A, Stack 8A, Stack 28, and Stack 29	0.02 gr/dscf each stack	12.42 lb/hr (All stacks combined)

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.2.7 Baghouse Parametric Monitoring Requirements

- (a) The Permittee shall monitor the pressure drop across the baghouses listed in the table below at least once per day when the units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Control Device

MPAC-2578/ Stack 28
MPAC-2576/ Stack 29
MPAC-1956 / Stack 6A
MPAC-1947 / Stack 5A
MPAC-2362/ Stack 8A
MPAC-3566 / Stack 4A
MPAC-2574/ Stack 3A
DC-31613/Stack 30

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

D.2.8 Visible Emission Notations

- (a) Visible emission notations of the emission unit exhausts listed in the table below shall be performed once per day during normal daylight operations while the emission units are operating. A trained employee or a trained contractor shall record whether emissions are normal or abnormal.

Control Device	Stack Number
MPAC-2578	28
MPAC-2576	29
MPAC-1956	6A
MPAC-1947	5A
MPAC-2362	8A
MPAC-3566	4A
MPAC-2574	3A
DC-31613	30

- (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 or contractor is a person who has worked or trained 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. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response shall be considered a deviation from this permit.

D.2.9 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 emission 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 a gas temperature, flow rate, air infiltration, leaks, dust traces or tribolows.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.10 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.7, the Permittee shall maintain records of the pressure drop across the baghouses listed in the table below. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

Control Device	Stack Number
MPAC-2578	28
MPAC-2576	29
MPAC-1956	6A
MPAC-1947	5A
MPAC-2362	8A
MPAC-3566	4A
MPAC-2574	3A
DC-31613	30

- (b) To document the compliance status with Condition D.2.8, the Permittee shall maintain a daily record of the visible emission notations of the stack exhausts of the control devices shown in the table below. The Permittee shall include in its daily record when a visible emission reading is not taken and the reason for the lack of a visible emission reading (e.g. the process did not operate that day).

Control Device	Stack Number
MPAC-2578	28
MPAC-2576	29

Control Device	Stack Number
MPAC-1956	6A
MPAC-1947	5A
MPAC-2362	8A
MPAC-3566	4A
MPAC-2574	3A
DC-31613	30

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Manufacturing Processes controlled by wet scrubber systems:

DR Technologies Wet Scrubber/Demister Collection System "North Scrubber" controlling four (4) liquid Drais mixers, two (2) reactors (constructed in 1990), a nitrogen blanket (serving reactors, strippers, and buffer tank), hotwells, identified as Unit 30. In case of a rupture disk failure, emissions from the knockout tanks H-30675 and H-30676 will also be controlled by this system. The system also includes four (4) melt tank vents for lines 4-7 for housekeeping purposes. The Scrubber/Demister system has a maximum capacity of 8,968 lbs/hr of fatty acid material and exhausts to Stack 2A.

Schneible Wet Scrubber/Demister Collection System "South Scrubber"

controlling three (3) liquid Drais mixers, two (2) reactors (constructed in 1985), a nitrogen blanket (serving reactors, strippers, and buffer tank), identified as Unit 17. In case of a rupture disk failure, emissions from knockout tanks H-30673, H-30674 and DEFI making are controlled by this system. This system also includes six (6) melt and hold tank vents for lines 1, 2, & 3 for housekeeping purposes. The Scrubber/Demister system has a maximum capacity of 5,736 lbs/hr of fatty acid material handled and exhausts to Stack 19.

(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 2-8-4(1)]

D.3.1 Nonattainment NSR Minor Limits [326 IAC 2-8] [326 IAC 2-1.1-5]

The Permittee shall comply with the following limitations:

- (a) PM2.5 emissions from the DR Technologies Wet Scrubber/Demister Collection System, identified as the "North Scrubber," shall not exceed 0.03 gr/dscf and 1.03 lbs/hr.
- (b) PM2.5 emissions from the Schneible Wet Scrubber/Demister Collection System, identified as the "South Scrubber," shall not exceed 0.03 gr/dscf and 1.03 lbs/hr.

Compliance with these limits and Condition D.2.1 combined with the potential to emit PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM2.5 to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) not applicable and shall make a minor source under 326 IAC 2-1.1-5 (Nonattainment New Source Review).

D.3.2 Particulate Matter Emissions for Lake County (PM10) [326 IAC 6.8-2-35]

Pursuant to 326 IAC 6.8-2-35, particulate matter emissions shall not exceed the emission limitations listed below:

- (a) PM10 emissions from the DR Technologies Wet Scrubber/Demister Collection System, identified as the "North Scrubber," shall not exceed 0.03 gr/dscf and 1.03 lbs/hr.
- (b) PM10 emissions from the Schneible Wet Scrubber/Demister Collection System, identified as the "South Scrubber," shall not exceed 0.03 gr/dscf and 1.03 lbs/hr.

D.3.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.3.4 Particulate Matter Emissions for Lake County (PM10) [326 IAC 6.8]

- (a) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, except as otherwise provided by statute or rule in this permit, the "North Scrubber" shall be in operation and controlling particulate matter emissions at all times the DR Technologies Wet Scrubber/Demister Collection System is in operation.
- (b) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, except as otherwise provided by statute or rule in this permit, the "South Scrubber" shall be in operation and controlling particulate matter emissions at all times the Schneible Wet Scrubber/Demister Collection System is in operation.

D.3.5 Testing Requirements [326 IAC 2-1.1-11]

- (a) The the Permittee shall perform PM₁₀ emissions stack testing of the emissions from Stack 2A within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition. PM₁₀ includes filterable and condensable PM.
- (b) The Permittee shall perform PM_{2.5} emissions stack testing of the emissions from Stack 2A within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition. PM_{2.5} includes filterable and condensable PM.
- (c) The Permittee shall perform PM₁₀ emissions stack testing of the emissions from Stack 19 within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition. PM₁₀ includes filterable and condensable PM.
- (d) The Permittee shall perform PM_{2.5} emissions stack testing of the emissions from Stack 19 within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition. PM_{2.5} includes filterable and condensable PM.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.3.6 Parametric Monitoring

- (a) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, the pressure drop across the "North Scrubber" and "South Scrubber" shall be monitored continuously and averaged over each operating hour. The Permittee shall maintain the hourly-average pressure drop across each scrubber within the normal range of 0.5 and 12.0 inches of water or a range established during the latest stack test. The Permittee shall take reasonable response steps whenever the one-hour average pressure drop is outside the normal range. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A one-hour average pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take reasonable response steps shall be considered a deviation from this permit.
- (b) The instruments used for determining the pressure drop shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.3.7 Scrubber Failure Detection

In the event that scrubber failure has been observed, the failed scrubber and the associated processes shall be shut down after the processing of the material from the scrubber 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).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.3.8 Record Keeping Requirements

- (a) To document the compliance status with Condition 3.6(a), the Permittee shall maintain a record of each one-hour pressure drop reading for the "North Scrubber". The Permittee shall include in its records when a pressure drop reading is not taken and the reason for the lack of a scrubber pressure drop reading (e.g., the process did not operate that day).
- (b) To document the compliance status with Condition 3.6(a), the Permittee shall maintain a record of each one-hour pressure drop reading for the "South Scrubber". The Permittee shall include in its records when a pressure drop reading is not taken and the reason for the lack of a scrubber 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 records required by this condition.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

- (a) The following VOC and HAP storage containers subject to 326 IAC 8-3:

Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids. [326 IAC 2-7-1(G)(iii)(AA)&(BB)]
- (b) Production related activities, including application of oils, greases, lubricants, and nonvolatile materials as temporary protective coatings; degreasing operations that do not exceed 145 gallons per 12 months; brazing, cutting torches, soldering and welding; and closed loop heating and cooling systems. [326 IAC 2-7-1(21)(G)(vi)(AA),(CC),(EE)&(FF)][326 IAC 8-3]
- (c) Cleaners and solvents, subject to 326 IAC 8-3, characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;
 - (2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.[326 IAC 2-7-1(21)(G)(vi)(DD)]

(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 2-8-4(1)]

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations after January 1, 1980, performing organic solvent degreasing operation located anywhere in the state, 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 operating requirements; and
- (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.4.2 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 without remote solvent reservoirs existing as of January 1, 1980, located in Clark, Elkhart, Floyd, Lake, Marion, Porter 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 into 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 a 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 or 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 used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser without remote solvent reservoirs existing as of January 1, 1980, located in Clark, Elkhart, Floyd, Lake, Marion, Porter or St. Joseph counties shall ensure that the following control equipment 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.4.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaning Degreasers) users, providers and manufacturers of solvents for use in cold cleaning degreasers in Clark, Floyd, Lake and Porter Counties, except for solvents intended to be used to clean electronic components, shall ensure that the following requirements are met:

- (a) The Permittee shall not operate a cold cleaning degreaser with a solvent vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (b) The Permittee shall maintain all of the following records for each cold cleaning degreaser solvent purchase:
 - (1) The name and address of the solvent supplier.
 - (2) The date of purchase.
 - (3) The type of solvent.
 - (4) The volume of each unit of solvent.
 - (5) The total volume of the solvent.
 - (6) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (c) All records required by Condition D.4.3(b) shall be retained on-site for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

SECTION E.1 NEW SOURCE PERFORMANCE STANDARDS (NSPS)

Emissions Unit Description:

- (d) Powerhouse Boiler No. 1, identified as Unit No. 49, constructed in 1995 with a maximum capacity of 98.3 MMBtu per hour, natural gas-fired, equipped with low NOx burners and flue gas recirculation, exhausting to Stack 1. [Under 40 CFR 60, Subpart Dc, Powerhouse Boiler No.1 is an affected facility.]

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

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 Powerhouse Boiler No. 1 except as otherwise specified in 40 CFR Part 60, Subpart Dc.
- (b) Pursuant to 40 CFR 60.10, the Permittee shall submit all 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, In 46204-2251

E.1.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, which are incorporated by reference as 326 IAC 12 for the Powerhouse Boiler No. 1 specified as follows.

- (a) 40 CFR 60.40c
(b) 40 CFR 60.41c
(c) 40 CFR 60.48c(a)
(d) 40 CFR 60.48c(g)(1)-(2)
(e) 40 CFR 60.48c(i)

SECTION E.2 NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) REQUIREMENTS [326 IAC 2-7-5(i)]

Emissions Unit Description:

- (d) Emergency generators as follows:
One (1) natural gas-fired Powerhouse Generator with a maximum capacity of 450 horsepower.
[326 IAC 2-7-1(21)(G)(xxii)(BB)] [Affected Facilities under 40 CFR 63, Subpart ZZZZ]

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

E.2.1 General Provisions Relating to NESHAP ZZZZ [40 CFR 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart ZZZZ.

E.2.2 Area Source Standards for Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ as specified in Attachment B of this permit:

- (a) 40 CFR 63.6580
- (b) 40 CFR 63.6585(a), (c)
- (c) 40 CFR 63.6590 (a)(1), (a)(3), (b)(3), (c)
- (d) 40 CFR 63.6595(a)(1), (c)
- (e) 40 CFR 63.6603 (a)
- (f) 40 CFR 63.6605
- (g) 40 CFR 63.6625 (e), (f), (h), (i)
- (h) 40 CFR 63.6640
- (i) 40 CFR 63.6645 (f)
- (j) 40 CFR 63.6655 (a)(4), (a)(5), (e), (f)
- (k) 40 CFR 63.6660
- (l) 40 CFR 63.6665
- (m) 40 CFR 63.6670
- (n) 40 CFR 63.6675

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Conopco, Inc. d/b/a Unilever HPC USA
Source Address: 1200 Calumet Avenue, Hammond, Indiana 46320
FESOP Permit No.: 089-23372-00229

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:

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**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Conopco, Inc. d/b/a Unilever HPC USA
Source Address: 1200 Calumet Avenue, Hammond, Indiana 46320
FESOP Permit No.: 089-23372-00229

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|--|

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

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

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N 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
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Conopco, Inc. d/b/a Unilever HPC USA
 Source Address: 1200 Calumet Avenue, Hammond, Indiana 46320
 FESOP Permit No.: 089-23372-00229

Months: _____ **to** _____ **Year:** _____

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 ΔNo deviations occurred this reporting period@.	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> 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: _____

**Indiana Department of Environmental Management
Office of Air Quality**

Attachment A

**Subpart Dc — Standards of Performance for Industrial-Commercial-Institutional Steam
Generating Units**

Source Description and Location

Source Name:	Conopco, Inc. d/b/a Unilever HPC USA
Source Location:	1200 Calumet Avenue Hammond, Indiana 46320
County:	Lake
SIC Code:	2841
Operation Permit Renewal No.:	089-23372-00229
Permit Reviewer:	Jillian Bertram/David Matousek

Complete Text of 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 (SO₂) 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 SO₂ 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 SO₂ 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); 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 SO₂ 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 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 SO₂ 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 SO₂.
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 (SO₂).

- (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 SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.
- (b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:
- (1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

- (i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO₂ emission rate (80 percent reduction); nor
 - (ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of SO₂ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO₂ emissions limit or the 90 percent SO₂ reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.
- (2) Combusts only coal and that uses an emerging technology for the control of SO₂ emissions shall neither:
 - (i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 50 percent (0.50) of the potential SO₂ emission rate (50 percent reduction); nor
 - (ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO₂ reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.
- (c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).
 - (1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) or less.
 - (2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.
 - (3) Affected facilities located in a noncontinental area.
 - (4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.
- (d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of the following:

- (1) The percent of potential SO₂ emission rate or numerical SO₂ emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that
 - (i) Combusts coal in combination with any other fuel;
 - (ii) Has a heat input capacity greater than 22 MW (75 MMBtu/hr); and
 - (iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and
- (2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

- E_s = SO₂ emission limit, expressed in ng/J or lb/MMBtu heat input;
- K_a = 520 ng/J (1.2 lb/MMBtu);
- K_b = 260 ng/J (0.60 lb/MMBtu);
- K_c = 215 ng/J (0.50 lb/MMBtu);
- H_a = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];
- H_b = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and
- H_c = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO₂ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

- (1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO₂ emission rate; and
- (2) Emissions from the pretreated fuel (without either combustion or post-combustion SO₂ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

- (1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

- (2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).
- (3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).
- (i) The SO₂ 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) 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 SO₂ 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 SO₂ 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 SO₂ emission limits under §60.42c is based on the average percent reduction and the average SO₂ 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 SO₂ 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 SO₂ emission rate (E_{ho}) and the 30-day average SO₂ 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_{ho0}) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao} (E_{ao0}). The E_{ho0} is computed using the following formula:

$$E_{ho0} = \frac{E_{ho} - E_w (1 - X_b)}{X_b}$$

Where:

- E_{ho0} = Adjusted Eho, ng/J (lb/MMBtu);
E_{ho} = Hourly SO₂ emission rate, ng/J (lb/MMBtu);
E_w = SO₂ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w = 0.
X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

- (2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.
- (f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

- (1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100 \left(1 - \frac{\%R_g}{100} \right) \left(1 - \frac{\%R_f}{100} \right)$$

Where:

- $\%P_s$ = Potential SO_2 emission rate, in percent;
 $\%R_g$ = SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and
 $\%R_f$ = SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

- (2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

- (i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_{gO}$) is computed from E_{aoO} from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate (E_{aiO}) using the following formula:

$$\%R_{gO} = 100 \left(1 - \frac{E_{aoO}}{E_{aiO}} \right)$$

Where:

- $\%R_{gO}$ = Adjusted $\%R_g$, in percent;
 E_{aoO} = Adjusted E_{ao} , ng/J (lb/MMBtu); and
 E_{aiO} = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

- (ii) To compute E_{aiO} , an adjusted hourly SO_2 inlet rate (E_{hiO}) is used. The E_{hiO} is computed using the following formula:

$$E_{hiO} = \frac{E_{hi} - E_w (1 - X_b)}{X_b}$$

Where:

- E_{hiO} = Adjusted E_{hi} , ng/J (lb/MMBtu);
 E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu);
 E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner

or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$; and
 X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

- (g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).
- (h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification 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_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.
- (j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[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 (O₂) or carbon dioxide (CO₂) 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 O₂ or CO₂ measurements and PM measurements obtained under this section,
 - (ii) The dry basis F factor, and
 - (iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.
 - (8) Method 9 of appendix A–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 O₂ (or CO₂) 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 the Federal Register, whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and
 - (iii) For O₂ (or CO₂), 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 SO₂ emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO₂ concentrations and either O₂ or CO₂ concentrations at the outlet of the SO₂ control device (or the outlet of the steam generating unit if no SO₂ control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO₂ concentrations and either O₂ or CO₂ concentrations at both the inlet and outlet of the SO₂ control device.
- (b) The 1-hour average SO₂ 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 SO₂ emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO₂ emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.
- (c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.
 - (1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

- (2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.
 - (3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO₂ CEMS at the inlet to the SO₂ control device shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted, and the span value of the SO₂ CEMS at the outlet from the SO₂ control device shall be 50 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.
 - (4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO₂ CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.
- (d) As an alternative to operating a CEMS at the inlet to the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.
- (1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according to 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 SO₂ input rate.
 - (2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.
 - (3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO₂ at the inlet or outlet of the SO₂ control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO₂ and CO₂ measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an

adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

- (e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.
- (f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

- (a) Except as provided in paragraphs (c), (d), (e), (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, SO₂, 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 SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.
- (b) The owner or operator of each affected facility subject to the SO₂ emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.
- (c) 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 SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.
- (e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.
 - (1) Calendar dates covered in the reporting period.
 - (2) Each 30-day average SO₂ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.
 - (3) Each 30-day average percent of potential SO₂ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.
 - (4) Identification of any steam generating unit operating days for which SO₂ or diluent (O₂ or CO₂) 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 SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
- (3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.
- (h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.
- (i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.
- (j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

**Indiana Department of Environmental Management
Office of Air Quality**

Attachment B

**40 CFR 63, Subpart ZZZZ — National Emission Standards for Hazardous Air Pollutants for
Stationary Reciprocating Internal Combustion Engines**

Source Description and Location

Source Name:	Conopco, Inc. d/b/a Unilever HPC USA
Source Location:	1200 Calumet Avenue Hammond, Indiana 46320
County:	Lake
SIC Code:	2841
Operation Permit Renewal No.:	089-23372-00229
Permit Reviewer:	Jillian Bertram/David Matousek

Complete Text of 40 CFR 63, Subpart ZZZZ

**Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary
Reciprocating Internal Combustion Engines**

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source

under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

[Link to an amendment published at 75 FR 9674, March 3, 2010.](#)

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(h).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; or

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source, an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source, an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE, an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE, an existing compression ignition (CI) stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

§ 63.6595 When do I have to comply with this subpart?

[Link to an amendment published at 75 FR 9675, March 3, 2010.](#)

(a) *Affected Sources.* (1) If you have an existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

[Link to an amendment published at 75 FR 9675, March 3, 2010.](#)

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a and 2a to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE, an existing 4SLB stationary RICE, or an existing CI stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

[73 FR 3605, Jan. 18, 2008]

§ 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

[Link to an amendment published at 75 FR 9675, March 3, 2010.](#)

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008]

§ 63.6602 xxx

[Link to an amendment published at 75 FR 9675, March 3, 2010.](#)

§ 63.6603 xxx

[Link to an amendment published at 75 FR 9675, March 3, 2010.](#)

§ 63.6604 xxx

[Link to an amendment published at 75 FR 9675, March 3, 2010.](#)

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

[Link to an amendment published at 75 FR 9675, March 3, 2010.](#)

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times, except during periods of startup, shutdown, and malfunction.

(b) If you must comply with emission limitations and operating limitations, you must operate and maintain your stationary RICE, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction.

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008]

§ 63.6612 xxx

[Link to an amendment published at 75 FR 9676, March 3, 2010.](#)

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

[Link to an amendment published at 75 FR 9676, March 3, 2010.](#)

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements in §63.7(e)(1) and under the specific conditions that this subpart specifies in Table 4. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

C_i = concentration of CO or formaldehyde at the control device inlet,

C_o = concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³ / J (dscf/10⁶ Btu).

F_c = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³ / J (dscf/10⁶ Btu).

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

Where:

X_{co2} = CO₂ correction factor, percent.

5.9 = 20.9 percent O₂ - 15 percent O₂, the defined O₂ correction value, percent.

(iii) Calculate the NO_x and SO₂ gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \quad (\text{Eq. 4})$$

Where:

%CO₂ = Measured CO₂ concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored

thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

§ 63.6625 What are my monitoring, installation, operation, and maintenance requirements?

[Link to an amendment published at 75 FR 9676, March 3, 2010.](#)

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO₂ at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

- (1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.
 - (2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
 - (3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.
 - (4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.
- (b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.
 - (c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.
 - (d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

- (a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.
- (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.
- (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

- (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
- (b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

[Link to an amendment published at 75 FR 9676, March 3, 2010.](#)

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you according to methods specified in Table 6 of this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) Consistent with §63.6(e) and 63.7(e)(1), deviations from the emission or operating limitations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations.

Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR §94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing emergency stationary RICE, an existing limited use emergency stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

[Link to an amendment published at 75 FR 9677, March 3, 2010.](#)

(a) If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions or a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions, you must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008]

§ 63.6650 What reports must I submit and when?

[Link to an amendment published at 75 FR 9677, March 3, 2010.](#)

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be

deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

§ 63.6655 What records must I keep?

[Link to an amendment published at 75 FR 9678, March 3, 2010.](#)

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(3), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

§ 63.6660 In what form and how long must I keep my records?

[Link to an amendment published at 75 FR 9678, March 3, 2010.](#)

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off-site for the remaining 3 years.

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

[Link to an amendment published at 75 FR 9678, March 3, 2010.](#)

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions: An existing 2SLB RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[73 FR 3606, Jan. 18, 2008]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

- (1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).
- (2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.
- (3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.
- (4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.
- (5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

[Link to an amendment published at 75 FR 9679, March 3, 2010.](#)

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO₂.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary RICE whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed on or after June 12, 2006, must comply with requirements specified in 40 CFR 60.4243(d).

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x, CO, and volatile organic compounds (VOC) into CO₂, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.*, remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008]

Table 1ato Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[Link to an amendment published at 75 FR 9679, March 3, 2010.](#)

[As stated in §63.6600, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions at 100 percent load plus or minus 10 percent]

For each...	You must meet the following emission limitations...
1. 4SRB stationary RICE	a. reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007;
	or
	b. limit the concentration of formaldehyde in the stationary RICE exhaust 350 ppbvd or less at 15 percent O ₂ .

[73 FR 3607, Jan. 18, 2008]

Table 1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600, 63.6630 and 63.6640, you must comply with the following operating emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions]

For each...	You must meet the following operating limitation...
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR.	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not	Comply with any operating limitations approved by the Administrator.

using NSCR; or	
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR.	

[73 FR 3607, Jan. 18, 2008]

Table 2 to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

[Link to an amendment published at 75 FR 9680, March 3, 2010.](#)

[As stated in §§63.6600 and 63.6601, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent]

For each...	You must meet the following emission limitation...
1. 2SLB stationary RICE	a. reduce CO emissions by 58 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O ₂ . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O ₂ until June 15, 2007.
2. 4SLB stationary RICE	a. reduce CO emissions by 93 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂ .
3. CI stationary RICE	a. reduce CO emissions by 70 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂ .

[73 FR 3608, Jan. 18, 2008]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Burn Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

[Link to an amendment published at 75 FR 9680, March 3, 2010.](#)

[As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary]

For each...	You must meet the following operating limitation...
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

[73 FR 3608, Jan. 18, 2008]

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[Link to an amendment published at 75 FR 9681, March 3, 2010.](#)

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[Link to an amendment published at 75 FR 9681, March 3, 2010.](#)

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

[Link to an amendment published at 75 FR 9682, March 3, 2010.](#)

[As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements]

For each . . .	Complying with the requirement to . . .	You must . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE with a brake horsepower $\geq 5,000$	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE (all stationary RICE subcategories and all brake horsepower ratings)	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. ¹

¹After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

[Link to an amendment published at 75 FR 9682, March 3, 2010.](#)

[As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE]

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D6522–00 (2005) ^a (incorporated by reference, see §63.14). Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D6522–00 (2005) ^a (incorporated by reference, see §63.14) or

		the control device		Method 10 of 40 CFR, appendix A. The CO concentration must be at 15 percent O ₂ , dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (2005).	(a) Measurements to determine O ₂ concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03 ^b , provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.

		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O ₂ concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03 ^b , provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

^aYou may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

^bYou may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[73 FR 3609, Jan. 18, 2008]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

[Link to an amendment published at 75 FR 9684, March 3, 2010.](#)

[As stated in §§63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following]

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. the average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
3. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
4. 4SRB stationary RICE	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and

		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
5. 4SRB stationary RICE	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
6. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
7. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations and Operating Limitations

[Link to an amendment published at 75 FR 9685, March 3, 2010.](#)

[As stated in §63.6640, you must continuously comply with the emissions and operating limitations as required by the following]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ¹ ; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ¹ ; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. 2SLB and 4SLB	a. Reduce CO emissions and	i. Collecting the monitoring data according to

stationary RICE and CI stationary RICE	using a CEMS	§63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and
		ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. 4SRB stationary RICE	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. 4SRB stationary RICE	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. reducing these data to 4-hour rolling averages;
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. 4SRB stationary RICE with a brake horsepower $\geq 5,000$	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved ¹ .
7. Stationary RICE	Limit the concentration of	i. Conducting semiannual performance tests

	formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ¹ ; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ¹ ; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

¹After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

[Link to an amendment published at 75 FR 9687, March 3, 2010.](#)

[As stated in §63.6650, you must comply with the following requirements for reports]

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b).
	b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
	c. If you had a startup, shutdown or malfunction during the reporting period, the information in §63.10(d)(5)(i)	i. Semiannually according to the requirements in §63.6650(b).
2. An immediate startup, shutdown, and malfunction report if actions addressing the startup, shutdown, or malfunction were inconsistent with your startup, shutdown, or malfunction plan during the reporting period	a. Actions taken for the event; and	i. By fax or telephone within 2 working days after starting actions inconsistent with the plan.
	b. The information in §63.10(d)(5)(ii).	i. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authorities. (§63.10(d)(5)(ii))

3. Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
	b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 3.a.i.
	c. Any problems or errors suspected with the meters	i. See item 3.a.i.

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ

[Link to an amendment published at 75 FR 9688, March 3, 2010.](#)

[As stated in §63.6665, you must comply with the following applicable general provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes	
§63.4	Prohibited activities and circumvention	Yes	
§63.5	Construction and reconstruction	Yes	
§63.6(a)	Applicability	Yes	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes	
§63.6(b)(5)	Notification	Yes	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and	Yes	

	reconstructed area sources that become major sources		
§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes	
§63.6(c)(3)–(4)	[Reserved]		
§36.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes	
§63.6(d)	[Reserved]		
§63.6(e)(1)	Operation and maintenance	Yes	
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, shutdown, and malfunction plan	Yes	
§63.6(f)(1)	Applicability of standards except during startup shutdown malfunction (SSM)	Yes	
§63.6(f)(2)	Methods for determining compliance	Yes	
§63.6(f)(3)	Finding of compliance	Yes	
§63.6(g)(1)–(3)	Use of alternate standard	Yes	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes	
§63.6(j)	Presidential compliance exemption	Yes	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610 and 63.6611.
§63.7(a)(3)	CAA section 114 authority	Yes	
§63.7(b)(1)	Notification of performance test	Yes	
§63.7(b)(2)	Notification of rescheduling	Yes	

§63.7(c)	Quality assurance/test plan	Yes	
§63.7(d)	Testing facilities	Yes	
§63.7(e)(1)	Conditions for conducting performance tests	Yes	
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes	
§63.7(f)	Alternative test method provisions	Yes	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes	
§63.7(h)	Waiver of tests	Yes	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No	
§63.8(b)(1)	Monitoring	Yes	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes	
§63.8(c)(2)–(3)	Monitoring system installation	Yes	

§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	
§63.8(f)(6)	Alternative to relative accuracy test	Yes	
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
§63.9(c)	Request for compliance extension	Yes	
§63.9(d)	Notification of special compliance requirements for new sources	Yes	
§63.9(e)	Notification of performance test	Yes	
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	
§63.9(g)(2)	Notification of use of COMS	No	Subpart ZZZZ does not contain

	data		opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
§63.9(i)	Adjustment of submittal deadlines	Yes	
§63.9(j)	Change in previous information	Yes	
§63.10(a)	Administrative provisions for record keeping/reporting	Yes	
§63.10(b)(1)	Record retention	Yes	
§63.10(b)(2)(i)–(v)	Records related to SSM	Yes	
§63.10(b)(2)(vi)–(xi)	Records	Yes	
§63.10(b)(2)(xii)	Record when under waiver	Yes	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes	
§63.10(b)(3)	Records of applicability determination	Yes	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes	
§63.10(d)(2)	Report of performance test results	Yes	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes	

§63.10(d)(5)	Startup, shutdown, and malfunction reports	Yes	
§63.10(e)(1) and (2)(i)	Additional CMS reports	Yes	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes	Except that §63.10(e)(3)(i)(C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes	
§63.11	Flares	No	
§63.12	State authority and delegations	Yes	
§63.13	Addresses	Yes	
§63.14	Incorporation by reference	Yes	
§63.15	Availability of information	Yes	

**Indiana Department of Environmental Management
Office of Air Quality**

Addendum to the Technical Support Document (ATSD) for a
Part 70 Operating Permit Transitioning to a Federally Enforceable State
Operating Permit (FESOP)

Source Background and Description
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Source Name:	Conopco, Inc. d/b/a Unilever HPC USA ("Unilever HPC")
Source Location:	1200 Calumet Avenue, Hammond, Indiana 46320
County:	Lake
SIC Code:	2841 – Soap & Other Detergents
FESOP No.:	F089-23372-00229
Permit Reviewer:	Jillian Bertram

On July 24, 2010, the Office of Air Quality (OAQ) had a notice published in The Post Tribune, Merrillville, IN and The Times in Munster, IN, stating that Conopco Inc., d/b/a Unilever HPC USA had applied for transition from a Part 70 Operating Permit to a FESOP. The notice also stated that the OAQ proposed to issue a FESOP 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.

Comments and Responses

On August 20, 2010, Dave Jordan of ERM submitted comments to IDEM, OAQ on behalf of Conopco Inc., d/b/a Unilever HPC USA on the draft FESOP.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

In Condition A.2(b), North Side Emission Units, item (1)(A) the MPAC ID number should be changed from MPAC-3262 to MPAC-2362.

Response to Comment 1:

IDEM agrees with the recommended changes. The permit has been revised as follows:

Flex-Kleen dust collector (MPAC-1956), identified as Unit 34, constructed in 1990, modified in 2001 and 2008, serves Silo 4 and Melt System Rework Hopper #4. The dust collector exhausts through Stack 6A. For maintenance operations, Flex-Kleen dust collector MPAC-1947 or dust collector MPAC-~~322~~362 can be operated to serve Silo 4 and Melt System Rework Hopper #4.

Comment 2:

On page 11 and 12 of the Technical Support Document (TSD), under the discussion of New Source Performance Standard applicability for Boiler No.1, it states that Boiler No. 1 is monitored by a NOx CEM. Please clarify that this language is in error.

Response to Comment 2:

As stated above, the TSD serves as a historic document and is not modified after the public comment period. IDEM, OAQ is stating here that Boiler No. 1 is not monitored by a NOx CEM. There are no permit changes in response to this comment.

Comment 3:

The emission calculations for American Hydrotherm Boiler No. 2 are based on a maximum heat input capacity of 25.10 MMBtu/hr. The maximum heat input capacity of this boiler is 12.22 MMBtu/hr.

Response to Comment 3:

IDEM agrees with the recommended change, Appendix A of this document shows the revised potential to emit of the boiler. This change does not affect any rule applicability or permit language.

Comment 4:

The emission factor for VOC for Powerhouse Boiler #1 should be 5.5 lb/mmcf. Emission calculations were done using 8.25 lb/mmcf.

Response to Comment 4:

IDEM agrees with the recommended change since this 5.5 lb/mmcf is the proper VOC emission factor from AP-42. Appendix A of this document shows the revised potential to emit of the boiler. This change does not affect any rule applicability or permit language.

Comment 5:

There are several inconsistencies in the calculations between the units listed in the uncontrolled calculations and the limited calculations for units in buildings 5, 15, and 15A. More specifically, Chip Roll #1-#3 and Inline and Screw Conveyors #1-#3, and Inline and Screw Conveyors #4-#7 appear on the limited table but not in the uncontrolled table, Duplex refiner #3, Plodders #1- #3, Chill Rolls #4-#7, Duplex Refiners #4-#7, and Plodders #4-#7 are on the uncontrolled table but not the limited table.

Response to Comment 5:

IDEM agrees with the recommended changes, Appendix A of this document shows the revised calculations. This change does not affect any rule applicability or permit language.

IDEM Contact

- (a) Questions regarding this proposed FESOP can be directed to Jillian Bertram at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317)233-1782 or toll free at 1-800-451-6027 extension 3-1782.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Company Name: **Conopco, Inc. d/b/a/ Unilever HPC USA**
 Address: **1200 Calumet Avenue, Hammond, Indiana 46320**
 Permit Number: **089-23372-00229**
 Reviewer: **Jillian Bertram**
 Date: **October 5, 2009**

Potential to Emit after Issuance (TPY) - Sourcewide Summary									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Boilers	1.71	6.83	6.83	0.54	4.94	75.49	89.85	1.62	1.69
Wet Scrubbers	90.24	9.02	9.02	0.00	0.00	0.00	0.00	0.00	0.00
Southside (Bldg. 15)	149.00	54.40	54.40	0.00	0.00	0.00	0.00	0.00	0.00
Northside (Bldg. 15A)				0.00	0.00	0.00	0.00	0.00	0.00
Bagging Operation (Bldg. 5)	8.42	2.72	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Total Potential to Emit	249.37	72.97	76.14	0.54	4.94	75.49	89.85	1.62	1.69
Major Source Threshold PSD	250	250	---	250	250	250	250	---	---
Major Source Threshold NA-NSR	---	---	100	---	---	---	---	---	---

**Appendix A: Emission Calculations
Uncontrolled Potential to Emit Summary**

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit (TPY) - Boilers									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Babcock-Wilcox Boiler No. 4	0.69	2.74	2.74	0.22	1.99	30.32	36.09	0.65	0.68
American Hydrotherm Boiler No. 1	0.10	0.41	0.41	0.03	0.29	4.50	5.35	0.10	0.10
American Hydrotherm Boiler No. 2	0.10	0.41	0.41	0.03	0.29	4.50	5.35	0.10	0.10
Powerhouse Boiler No. 1	0.82	3.27	3.27	0.26	2.37	36.17	43.06	0.77	0.81
Subtotal Boilers	1.71	6.83	6.83	0.54	4.94	75.49	89.85	1.62	1.69

Potential to Emit (TPY) - Wet Scrubbers									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Schenible Wet Scrubber System	45.12	45.12	45.12	0.00	0.00	0.00	0.00	0.00	0.00
D.R Technology Wet Scrubber System	45.12	45.12	45.12	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Wet Scrubbers	90.24	90.24	90.24	0.00	0.00	0.00	0.00	0.00	0.00

Potential to Emit (TPY) - Bagging Operation - Building 5									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Bagging Silo Dust Collector (MPAC #6557)	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Building 5	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00

(Continued on next page)

**Appendix A: Emission Calculations
Uncontrolled Potential to Emit**

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit (TPY) - Southside Emission Units - Building 15									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Soap Noodle Silo #1	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #2	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #3	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #1	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #2	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #3	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Bagging Station	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Building 15	206.39	144.46	144.46	0.00	0.00	0.00	0.00	0.00	0.00

Potential to Emit (TPY) - Northside Emission Units - Building 15A									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Soap Noodle Silo #4	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #5	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #6	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #7	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Transfer Silo	21.77	15.24	15.24	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #4	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #5	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #6	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #7	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
TiO ₂ Dump Station	0.29	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Building 15A	286.02	200.20	200.20	0.00	0.00	0.00	0.00	0.00	0.00

(Continued on next page)

Notes:

- 1) No information is available for PM2.5. All PM10 is assumed to be PM2.5.

Company Name: **Conopco, Inc. d/b/a/ Unilever HPC USA**
 Address: **1200 Calumet Avenue, Hammond, Indiana 46320**
 Permit Number: **089-23372-00229**
 Reviewer: **Jillian Bertram**
 Date: **October 5, 2009**

Potential to Emit (TPY) - Sourcewide Summary									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Boilers	1.71	6.83	6.83	0.54	4.94	75.49	89.85	1.62	1.69
Wet Scrubbers	90.24	90.24	90.24	0.00	0.00	0.00	0.00	0.00	0.00
Southside (Bldg. 15)	206.39	144.46	144.46	0.00	0.00	0.00	0.00	0.00	0.00
Northside (Bldg. 15A)	286.02	200.20	200.20	0.00	0.00	0.00	0.00	0.00	0.00
Bagging Operation (Bldg. 5)	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Total Potential to Emit	592.78	447.62	447.62	0.54	4.94	75.49	89.85	1.62	1.69

Notes:

- 1) No information is available for PM2.5. All PM10 is assumed to be PM2.5.
- 2) The highest HAP is methanol and comes from the soap drying process.
- 3) The December 1993 rule change to the LEAR/EO requirements lowered the threshold of the level of emissions that trigger review as a major modification for severe nonattainment areas from 100 to 25 tons per year of VOCs.

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Non-HAP Emissions
MM BTU/HR <100
Babcock-Wilcox Boiler No. 4

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

82.40

721.82

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.69	2.74	0.22	36.09	1.99	30.32

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only - HAP Emissions
MM BTU/HR <100
Babcock-Wilcox Boiler No. 4

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	7.579E-04	4.331E-04	2.707E-02	6.496E-01	1.227E-03

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.805E-04	3.970E-04	5.053E-04	1.371E-04	7.579E-04

Worst Case HAP 0.65 tpy (Hexane)
Total HAPs 0.68 tpy

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Non-HAP Emissions
MM BTU/HR <100
American Hydrotherm Boiler No. 1

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

12.22

107.05

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.10	0.41	0.03	5.35	0.29	4.50

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only - HAP Emissions
MM BTU/HR <100
American Hydrotherm Boiler No. 1

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.124E-04	6.423E-05	4.014E-03	9.635E-02	1.820E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.676E-05	5.888E-05	7.494E-05	2.034E-05	1.124E-04

Worst Case HAP 0.10 tpy (Hexane)
 Total HAPs 0.10 tpy

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
 Natural Gas Combustion Only - Non-HAP Emissions
 MM BTU/HR <100
 American Hydrotherm Boiler No.2**

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

12.22

107.05

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.10	0.41	0.03	5.35	0.29	4.50

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only - HAP Emissions
MM BTU/HR <100
American Hydrotherm Boiler No.2

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.124E-04	6.423E-05	4.014E-03	9.635E-02	1.820E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.676E-05	5.888E-05	7.494E-05	2.034E-05	1.124E-04

Worst Case HAP 0.10 tpy (Hexane)
 Total HAPs 0.10 tpy

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Natural Gas Combustion Only - Non-HAP Emissions
MMBTU/HR < 100
Powerhouse Boiler No. 1

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

98.30

Potential Throughput
MMCF/yr

861.11

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	1.90	7.60	0.60	100.00	5.500	84.0000
	0.82	3.27	0.26	43.06	2.37	36.17

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

Notes:

- 1) Emission factors for CO, SO2, PM and PM10 are from AP-42, Chapter 1.4, Table 1.4-2, SCC 1-02-006-01.
- 2) The emission factor for NOx is based on AP-42, Chapter 1.4, Table 1.4-2, SCC 1-02-006-01 for boilers without low NOx burners and FGR. The source has low NOx burners and flue gas recirculation but is not taking credit for the reduction in NOx.
- 3) The emission factor for VOC is based on AP-42, Chapter 1.4, Table 1.4-2, SCC 1-02-006-01 for boilers with low NOx burners and FGR. The emission factor shown above is the AP-42 emission factor of 5.5 lb/MMBtu with a safety factor of 1.5.

Methodology:

- 1) All emission factors are based on normal firing.
- 2) MMBtu = 1,000,000 Btu
- 3) MMCF = 1,000,000 Cubic Feet of Gas
- 4) Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hr/yr x 1 MMCF/ 1,000 MMBtu

Appendix A: Emission Calculations
Natural Gas Combustion Only - HAP Emissions
MMBTU/HR < 100
Powerhouse Boiler No. 1

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	9.04E-04	5.17E-04	3.23E-02	7.75E-01	1.46E-03

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.15E-04	4.74E-04	6.03E-04	1.64E-04	9.04E-04

Worst Case HAP 0.77 TPY (Hexane)
 Total HAPs 0.81 TPY

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Particulate Matter Emissions - Units Controlled by Scrubbers

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Limited Potential to Emit				
Emission Unit	Air Flow (dscfm)	Allowable Grain Loading (g/dscf)	Limited PM / PM10/ PM2.5 (lb/hr)	Limites PM / PM10 / PM2.5 (TPY)
Schenible Wet Scrubber (South Scrubber)	4,005.00	0.03	1.03	4.51
D.R. Technology Wet Scrubber (North Scrubber)	4,005.00	0.03	1.03	4.51
		Subtotal	2.06	9.02

Potential to Emit				
Emission Unit	Controlled Emissions (lb/hr)	Control Efficiency	Controlled PM / PM10/ PM2.5 (lb/hr)	Controlled PM / PM10 / PM2.5 (TPY)
Schenible Wet Scrubber (South Scrubber)	1.03	90.00%	10.30	45.12
D.R. Technology Wet Scrubber (North Scrubber)	1.03	90.00%	10.30	45.12
		Subtotal	20.60	90.24

Notes:

- 1) In accordance with 326 IAC 6.8-2-35, the particulate matter emissions from each scrubber is limited to 0.03 g/dscf and 1.03 lb/hr for each scrubber. Allowable emissions are based on a projected dry air flow rate of 4,005 dcfm.
- 2) The Schenible Wet Scrubber (South Scrubber) controls the following emission units: Three (3) drais mixers, two (2) reactors, three (3) melt tanks and three (3) hold tank vent lines for lines 1, 2 and 3.
- 3) The D.R Technology Wet Scrubber (North Scrubber) controls the following emission units: Four (4) drais mixers, two (2) reactors, four (4) DEFI hot wells and four (4) melt tanks for lines 4, 5, 6 and 7.
- 4) PM is assumed to be equal to PM10 for these emission units. PM10 is assumed to equal PM2.5.

Methodology:

- 1) Limited PTE PM/PM10/PM2.5 (lb/hr) = Air Flow (dscfm) x Grain Loading (g/dscf) x (1 lb / 7,000 g) x (60 min / hr)
- 2) Limited PTE PM/PM10/PM2.5 (TPY) = PTE PM/PM10/PM2.5 (lb/hr) x 8,760 hr/yr x (1 ton / 2,000 lb)
- 3) PTE PM/PM10/PM2.5 (lb/hr) = PTE PM/PM10/PM2.5 (lb/hr) (1 - Removal Efficiency)
- 4) PTE PM/PM10/PM2.5 (TPY) = PTE PM/PM10/PM2.5 (TPY) (1 - Removal Efficiency)

Appendix A: Emission Calculations
Uncontrolled PTE of Particulate Matter - Buildings 5 & 15

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit - Southside in Building 15									
Description	MPAC #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Soap Noodle Silo #1	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #2	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #3	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Chip Mixer #1	7057	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr
Chip Mixer #2	2370	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr
Chip Mixer #3	2371	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr
Chip Bagging Station	---	11,000.00	ton/yr	1.070000	lb PM10/ton	1.3437	5.89	8.42	SCC3-05-016-27, AP-42, Table 11.17-2
Chill Roll #1	2407	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @ 5,600 lb/hr
Chill Roll #2	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @ 5,600 lb/hr
Chill Roll #3	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @ 5,600 lb/hr
Incline and Screw Conveyor #1	---	5,480.00	lb/hr	0.034000	lb PM10/ton	0.0932	0.41	0.59	09/15/09 Stack Test @ 3,024 lb/hr
Incline and Screw Conveyor #2	---	5,480.00	lb/hr	0.034000	lb PM10/ton	0.0932	0.41	0.59	09/15/08 Stack Test @ 3,024 lb/hr
Incline and Screw Conveyor #3	---	5,480.00	lb/hr	0.034000	lb PM10/ton	0.0932	0.41	0.59	09/15/09 Stack Test @ 3,024 lb/hr
Subtotal						144.46	206.39		

Potential to Emit - Southside in Building 5									
Description	MPAC #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Bagging Silo Dust Collector (MPAC #6557)	MPAC #6557	11,000.00	tons/yr	1.07	lb PM10/ton	1.3437	5.89	8.42	SCC3-05-016-27, AP-42, Ch 11.17, Table 11.17-2
Subtotal						5.89	8.42		

Potential to Emit - Trivial Emission Units - Southside Building 15									
Description	MPAC #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Roll Mill #1	Trivial	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.0022	0.0031	10/01/08 Stack Test @ 5,611 lb/hr
Roll Mill #2	Trivial	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.0022	0.0031	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #3	Trivial	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.0022	0.0031	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #1	Trivial	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.0026	0.0037	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #2	Trivial	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.0026	0.0037	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #3	Trivial	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.0026	0.0037	10/01/08 Stack Test @ 5,611 lb/hr
Subtotal						0.0144	0.0204		

Notes:

- The source stated as part of its application that all DEFI building emission units operate in a batch mode and are process limited by the drais mixing operations. There are a total of seven mixers and produce on average 132 to 135 batches per day. There are four north drais mixers capable of processing approximately 75 batches of material weighing 7,014 lb/batch per day. The process throughput of all northside emission units after the drais mixers has been updated to indicate a maximum bottlenecked production of 5,480 lb soap per hour. There are three southside drais mixers capable of processing approximately 63 batches of material weighing 6,230 lb/batch. The process throughput of all southside emission units after the drais mixers has been updated to indicate a maximum bottlenecked production of 5,450 lb soap per hour. Worst case throughput of 4,580 lb/hr was used in emission calculations for all DEFI building emission units.
- The post control emission factor for the soap noodles was measured at an operating rate of 11,000 lb soap per hour. The source wishes to be able to fill noodle silos #1 to #7 in the DEFI building using the output of two drais mixers. The post-control emission factor measured on November 18, 2004 for a single soap noodle silo was 0.00127 lb PM10 / ton soap. The pre-control emission factor was estimated and the methodology is shown below.
- Emissions from stack test were for PM10 only. PM10 emissions were assumed to be 70% of total PM emissions.
- Trivial emission units are not required to be included in the Part 70 Operating Permit and are not included in the subtotal above. Emissions from trivial units are shown in this spreadsheet to verify their status. In accordance with 326 2-7-1(40)(A)(ii)(FF), uncontrolled PM10 emissions from these sources is less than one pound per day.
- Where previous emission unit number was not assigned, the MPAC number is sighted.
- The emission factors for the incline and screw conveyors is based on emission testing conducted on dust collector DC-1052 on September 15, 2009. The test showed a controlled emission factor for PM10 of 0.017 lb/ton. Duct collector DC-1052 controlled emissions from chill rolls #4 to #7, pelletizers #4 to #7, refiners #4 to #7 and incline and screw conveyors #4 to #7 at the time of the test. The emission factor for the incline screw and conveyors shown above was estimated by assuming all emissions in the stack test originated from a single incline and screw conveyor with a baghouse operating at 50% efficiency.

Methodology:

- Pre-Control Emission Factor = (Stack Test Emission Factor) (1 - 99.9%)
- PM Emissions (TPY) = PM10 Emissions (TPY) / 0.70 [Where PM10 is assumed to equal PM2.5.]
- PM10 Emissions (lb/hr) = Capacity (lb soap/hr) x Emission Factor (lb PM10/ton soap) / (2,000 lb soap/ton soap)
- PM10 Emissions (TPY) = PM10 Emissions (lb/hr) x (8,760 hr/yr) / (2,000 lb PM10/ton PM10)
- PM10 Emissions (lb/hr) = Capacity (ton soap/yr) x Emission Factor (lb PM10/ton soap) / (8,760 hr/yr)

Appendix A: Emission Calculations
Uncontrolled PTE of Particulate Matter - Building 15A

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit - Northside in Building 15A									
Description	MPAC # or Unit #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Soap Noodle Silo #4	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #5	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #6	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #7	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Transfer Silo	---	5,480.00	lb/hr	1.270000	lb PM10/ton	3.4798	15.24	21.77	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Chip Mixer #4	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
Chip Mixer #5	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
Chip Mixer #6	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
Chip Mixer #7	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
Incline and Screw Conveyor #4	---	5,480.00	lb/hr	0.340000	lb PM10/ton	0.9316	4.08	5.83	10/02/08 Stack Test @ 3,000 lb/hr
Incline and Screw Conveyor #5	---	5,480.00	lb/hr	0.340000	lb PM10/ton	0.9316	4.08	5.83	09/15/09 Stack Test @ 3,024 lb/hr
Incline and Screw Conveyor #6	---	5,480.00	lb/hr	0.340000	lb PM10/ton	0.9316	4.08	5.83	09/15/09 Stack Test @ 3,024 lb/hr
Incline and Screw Conveyor #7	---	5,480.00	lb/hr	0.340000	lb PM10/ton	0.9316	4.08	5.83	09/15/09 Stack Test @ 3,024 lb/hr
TiO ₂ Dump Station	---	2,380.00	lb/hr	0.038000	lb PM10/ton	0.0452	0.20	0.29	10/02-10/04/2008 @2,384 lb/hr
Subtotal							216.52	309.34	

Potential to Emit - Trivial Emission Units - Northside Building 15A									
Description	MPAC # or Unit #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Chill Roll #4	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @5,600 lb/hr
Chill Roll #5	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @5,600 lb/hr
Chill Roll #6	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @5,600 lb/hr
Chill Roll #7	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @5,600 lb/hr
Duplex Refiner #4	#2446 / #2448	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #5	#2470 / #2475	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #6	#2491	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #7	#2514	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #4	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #5	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #6	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #7	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Subtotal							0.40	0.56	

Notes:

- Throughputs are bottlenecked by the drais mixers as detailed in the Northside calculations. The only units not at the bottlenecked throughput are the noodle silos and the soap dryers. In addition, tallow emission units listed above will be taken out of service in the fourth quarter of 2009 and the emissions have not been updated from the last Part 70 Operating Permit amendment issued.
- Emissions from stack tests were for PM10 only. PM10 emissions were assumed to be 70% of total PM emissions.
- Trivial emission units are not required to be included in the Part 70 Operating Permit and are not included in the subtotal above. Emissions from trivial units are shown in this spreadsheet to verify their status. In accordance with 326 2-7-1(40)(A)(ii)(FF), units with uncontrolled PM10 emissions of less than one pound per day are trivial.
- Some units were not separately listed in past permits. The emission unit identifier most closely matching is shown above or emission unit name is the new emission unit number.
- The emission factors for the incline and screw conveyors is based on emission testing conducted on dust collector DC-1052 on September 15, 2009. The test showed a controlled emission factor for PM10 of 0.017 lb/ton. Duct collector DC-1052 controlled emissions from chill rolls #4 to #7, pelletizers #4 to #7, refiners #4 to #7 and incline and screw conveyors #4 to #7 at the time of the test. The emission factor for the incline screw and conveyors shown above was estimated by assuming all emissions in the stack test originated from a single incline and screw conveyor with a baghouse operating at 50% efficiency.

Methodology:

- PM emissions (TPY) = PM10 Emissions (TPY) / 0.70 [Where PM10 is assumed to equal PM2.5]
- PM10 Emissions (lb/hr) = Capacity (lb soap/hr) x Emission Factor (lb PM10/ton soap) (2,000 lb soap/ton soap)
- PM10 (lb/hr) = PM10 Emissions (lb/hr) x 8,760 hr/yr (2,000 lb soap/ton soap)

Appendix A: Emission Calculations
Limited PTE of Particulate Matter - Buildings 5 & 15

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Limited Potential to Emit - Southside in Building 15							
Description	Emission Unit ID	Uncontrolled		Overall Control Efficiency	Controlled PTE		Comments
		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	
Soap Noodle Silo #1	Unit 18	30.59	43.70	96.0%	1.22	1.75	
Soap Noodle Silo #2	Unit 19	30.59	43.70	96.0%	1.22	1.75	
Soap Noodle Silo #3	Unit 20	30.59	43.70	96.0%	1.22	1.75	
Chip Mixer #1	Unit 21	15.60	22.29	96.0%	0.62	0.89	Controlled by an aspiration filter and exhausts indoors.
Chip Mixer #2	Unit 22	15.60	22.29	96.0%	0.62	0.89	Controlled by an aspiration filter and exhausts indoors.
Chip Mixer #3	Unit 23	15.60	22.29	96.0%	0.62	0.89	Controlled by an aspiration filter and exhausts indoors.
Chip Bagging Station	Station #3	5.89	8.42	96.0%	0.24	0.34	
Chill Roll #1	Unit 25	0.10	0.14	0.0%	0.10	0.14	Emissions are uncontrolled
Chill Roll #2	Unit 25	0.10	0.14	0.0%	0.10	0.14	Emissions are uncontrolled
Chill Roll #3	Unit 25	0.10	0.14	0.0%	0.10	0.14	Emissions are uncontrolled
Incline and Screw Conveyor #1	Unit 25	0.41	0.59	0.0%	0.41	0.59	Emissions are uncontrolled
Incline and Screw Conveyor #2	Unit 25	0.41	0.59	0.0%	0.41	0.59	Emissions are uncontrolled
Incline and Screw Conveyor #3	Unit 25	0.41	0.59	0.0%	0.41	0.59	Emissions are uncontrolled
Duplex Refiner #3	Trivial	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled
Plodder #1	Trivial	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled
Plodder #2	Trivial	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled
Plodder #3	Trivial	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled
				Subtotal	7.29	10.45	

Limited Potential to Emit - Southside in Building 5							
Description	Emission Unit ID	Uncontrolled		Overall Control Efficiency	Controlled PTE		Comments
		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	
Bagging Silo Dust Collector (MPAC #6557)	MPAC #6557	5.89	8.42	55.0%	2.65	3.79	
				Subtotal	2.65	3.79	

Notes:

1) Uncontrolled emissions were calculated on previous spreadsheets.

Methodology:

1) Controlled Emissions = Uncontrolled Emissions (TPY) x (1- Control Efficiency)

Appendix A: Emission Calculations
Limited PTE of Particulate Matter - Building 15A

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Northside in Building 15A							
Description	MPAC # or Unit #	Uncontrolled		Overall Control Efficiency	Controlled		Comments
		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	
Soap Noodle Silo #4	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Soap Noodle Silo #5	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Soap Noodle Silo #6	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Soap Noodle Silo #7	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Transfer Silo	---	15.24	21.77	96.0%	0.61	0.87	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Chip Mixer #4	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Chip Mixer #5	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Chip Mixer #6	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Chip Mixer #7	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Incline and Screw Conveyor #4	---	4.08	5.83	0.0%	4.08	5.83	Emissions are uncontrolled and vent indoors
Incline and Screw Conveyor #5	---	4.08	5.83	0.0%	4.08	5.83	Emissions are uncontrolled and vent indoors
Incline and Screw Conveyor #6	---	4.08	5.83	0.0%	4.08	5.83	Emissions are uncontrolled and vent indoors
Incline and Screw Conveyor #7	---	4.08	5.83	0.0%	4.08	5.83	Emissions are uncontrolled and vent indoors
TiO ₂ Dump Station	---	4.08	5.83	0.0%	4.08	5.83	Emissions are uncontrolled and vent indoors
Chill Roll #4	---	0.02	0.10	0.0%	0.02	0.10	Emissions are uncontrolled and vent indoors
Chill Roll #5	---	0.02	0.10	0.0%	0.02	0.10	Emissions are uncontrolled and vent indoors
Chill Roll #6	---	0.02	0.10	0.0%	0.02	0.10	Emissions are uncontrolled and vent indoors
Chill Roll #7	---	0.02	0.10	0.0%	0.02	0.10	Emissions are uncontrolled and vent indoors
Duplex Refiner #4	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
Duplex Refiner #5	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
Duplex Refiner #6	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
Duplex Refiner #7	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
Plodder #4	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
Plodder #5	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
Plodder #6	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
Plodder #7	---	0.00	0.00	0.0%	0.00	0.00	Emissions are uncontrolled and vent indoors
				Subtotal	28.45	40.98	

Notes:

1) Uncontrolled emissions were calculated on previous spreadsheets.

Methodology:

1) $\text{Controlled Emissions} = \text{Uncontrolled Emissions (TPY)} \times (1 - \text{Control Efficiency})$

**Appendix A: Emission Calculations
326 IAC 6-3-2 Emission Limitations**

**Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009**

- 1) Particulate matter emissions from emission units shall be limited by the following equation unless the emission limitation in 326 IAC 6.8 is more restrictive:

$$E \text{ (lb/hr)} = 4.10 \times P^{0.67}$$

Where:

P is the process weight rate in tons per hour.

E is the allowable particulate matter emission rate in pounds per hour.

Emission Unit	Throughput (lb/hr)	Uncontrolled PM10 Emissions (lb/hr)	Controlled PM10 Emissions (lb/hr)	326 IAC 6-3-2 Limit (lb/hr)	326 IAC 6.8 Limit (lb/hr)	Which is more restrictive?		
Wet Scrubbers								
Schenble Scrubber	5,480.00	10.30	1.03	8.06	1.03	326 IAC 6.8		
DR Technology Scrubber	5,480.00	10.30	1.03	8.06	1.03	326 IAC 6.8		
Building 5								
Bagging Silo (MPAC #6557)	2,512.00	1.35	0.61	4.78	0.62	326 IAC 6.8		
Building 15								
Soap Noodle Silo #1	11,000.00	6.9850	0.2794	12.85	12.42	326 IAC 6.8		
Soap Noodle Silo #2	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #3	11,000.00	6.9850	0.2794	12.85				
Chip Mixer #1	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #2	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #3	5,480.00	3.5620	0.1425	8.06				
Chip Bagging Station	2,512.00	1.3500	0.0540	4.78				
Chill Roll #1	5,480.00	0.0219	0.0219	8.06				
Chill Roll #2	5,480.00	0.0219	0.0219	8.06				
Chill Roll #3	5,480.00	0.0219	0.0219	8.06				
Incline and Screw Conveyor #1	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #2	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #3	5,480.00	1.3015	1.3015	8.06				
Building 15A								
Soap Noodle Silo #4	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #5	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #6	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #7	11,000.00	6.9850	0.2794	12.85				
Transfer Silo	5,480.00	3.4798	0.1392	8.06				
Chip Mixer #4	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #5	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #6	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #7	5,480.00	3.5620	0.1425	8.06				
Incline and Screw Conveyor #4	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #5	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #6	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #7	5,480.00	1.3015	1.3015	8.06				
TiO2 Dump Station	2,380.00	0.0452	0.0452	4.61				

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for a Part 70 Operating Permit
Transitioning to a Federally Enforceable State Operating Permit (FESOP)

Source Description and Location
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Source Name:	Conopco, Inc. d/b/a Unilever HPC USA ("Unilever HPC")
Source Location:	1200 Calumet Avenue, Hammond, Indiana 46320
County:	Lake
SIC Code:	2841 – Soap & Other Detergents
FESOP No.:	F089-23372-00229
Permit Reviewer:	Jillian Bertram

On July 17, 2006, the Office of Air Quality (OAQ) received an application from Conopco, Inc. d/b/a Unilever HPC USA ("Unilever HPC") related to the transition of a Part 70 Operating Permit to a FESOP.

Existing Approvals

Since the issuance of the Part 70 Operating Permit (T 089-6623-00229) on April 19, 2002, the source has constructed or has been operating under the following approvals as well:

- (a) First Administrative Amendment No. (089-15624-00229), issued on July 16, 2002;
- (b) First Minor Permit Modification No. (089-16108-00229), issued on June 20, 2003;
- (c) Second Minor Permit Modification No. (089-17907-00229), issued on September 25, 2003;
- (d) Third Minor Permit Modification No. (089-17909-00229), issued on November 26, 2003;
- (e) Second Administrative Amendment No. (089-19880-00229), issued on September 1, 2004; and
- (f) Third Administrative Permit Amendment No. (089-19871-00229), issued on September 27, 2005.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

In this application, the source is transitioning from a Part 70 Operating Permit to a FESOP.

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148 th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O ₃	Nonattainment Subpart 2 Moderate effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.	

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.

(1) 1-hour ozone standard

On December 22, 2006, the United States Court of Appeals, District of Columbia issued a decision which served to partially vacate and remand the U.S. EPA's final rule for implementation of the eight-hour National Ambient Air quality Standard for ozone. South Coast Air Quality Mgmt. Dist. v. EPA, 472 F.3d 882 (D.C. Cir., December 22, 2006), rehearing denied 2007 U.S. App. LEXIS 13748 (D.C. Cir., June 8, 2007). The U.S. EPA has instructed IDEM to issue permits in accordance with its interpretation of the South Coast decision as follows: Gary-Lake-Porter County was previously designated as a severe non-attainment area prior to revocation of the one-hour ozone standard; therefore, pursuant to the anti-backsliding provisions of the Clean Air Act, any new or existing source must be subject to the major source applicability cut-offs and offset ratios under the area's previous one-hour standard designation. This means that a source must achieve the Lowest Achievable Emission Rate (LAER) if it exceeds 25 tons per year of VOC emissions and must offset any increase in VOC emissions by a decrease of 1.3 times that amount.

On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NOx threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.

(2) 8-hour ozone standard

VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

- (b) **PM_{2.5}**
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM_{2.5} promulgated on May 8, 2008, and effective on July 15, 2008. Therefore, direct PM_{2.5} and SO₂ 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) **Other Criteria Pollutants**
Lake County has been classified as attainment or unclassifiable in Indiana for PM₁₀, SO₂, NO_x, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Note: Although the source operates under two-digit SIC code 28 for Chemical and Allied Products, there is no chemical synthesis involved, and therefore, the source is not considered a chemical plant.

Background and Description of Permitted Emission Units

The Office of Air Quality (OAQ) has reviewed an application, submitted by Conopco, Inc. d/b/a Unilever HPC USA ("Unilever HPC") on July 16, 2006 relating to the transition from a Part 70 Operating Permit to a FESOP.

The source consists of the following permitted emission units:

- 1) **Boilers, identified as follows:**
 - (a) Babcock-Wilcox Boiler No. 4, identified as Unit No. 3, constructed in 1936, with a maximum capacity of 82.4 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 2.
 - (b) American Hydrotherm Boiler No. 1, identified as Unit No. 16, constructed in 1985, with a maximum capacity of 12.22 MMBtu per hour, natural gas-fired, emissions are uncontrolled, exhausting to Stack 18.
 - (c) American Hydrotherm Boiler No. 2, identified as Unit No. 29, constructed February 22, 1989, with a maximum capacity of 12.22 MMBtu per hour, natural

gas-fired, emissions are uncontrolled, exhausting to Stack 1A.

- (d) Powerhouse Boiler No. 1, identified as Unit No. 49, constructed in 1995 with a maximum capacity of 98.30 MMBtu per hour, natural gas-fired, NOx emissions are controlled with low NOx burners and flue gas recirculation and monitored by a NOx CEM, exhausting to Stack 1. [Under 40 CFR 60, Subpart Dc, Powerhouse Boiler No.1 is an affected facility.]

- 2) Manufacturing Processes controlled by Dust Collector Systems, identified as follows:

South Side Emission Units - Building 15

- (a) Three (3) Soap Noodle Silos (Silos #1, #2 and #3), constructed in 1985, identified as Units 18, 19 and 20, each with a maximum throughput of 11,000 pounds of soap per hour, each silo has a melt system rework hopper (Hoppers #1, #2 and #3), connected by a common exhaust header and controlled by a maximum of two dust collectors identified as DC-1 exhausting to Stack 28 and DC-2 exhausting to Stack 29.
- (b) Three (3) Chip Mixers, constructed in 1985, identified as Chip Mixer No. 1, Chip Mixer No. 2, Chip Mixer No. 3, each with a maximum capacity of 5,480 pounds of soap per hour, controlled by aspiration filters #9663, #9664 and #9667, respectively, exhausting indoors only.
- (c) One (1) Chip Bagging Station, constructed in 1985, identified as Station #3, with a maximum capacity of 7,875 pounds of soap per hour, controlled by aspiration filter #9667, exhausting indoors only.

North Side Emission Units - Building 15A

- (a) Four (4) Soap Noodle Silos, constructed in 1985, identified as Noodle Silo #4, Noodle Silo #5, Noodle Silo #6 and Noodle Silo #7, constructed in 1985, identified as Unit 26, each with a maximum throughput of 11,000 pounds of soap per hour, connected by a common exhaust header and controlled by dust collectors as described below:
 - (1) Flex-Kleen dust collector (MPAC-1956), identified as Unit 34, constructed in 1990, modified in 2001 and 2008, serves Silo 4 and Melt System Rework Hopper #4. The dust collector exhausts through Stack 6A. For maintenance operations, Flex-Kleen dust collector MPAC-1947 or dust collector MPAC-2362 can be operated to serve Silo 4 and Melt System Rework Hopper #4.
 - (2) Flex-Kleen dust collector (MPAC-3566), identified as Unit 33, constructed in 1990, modified in 2001 and 2008, serves Silo 5 and Melt System Rework Hopper #5. The dust collector exhausts through

Stack 5A. For maintenance operations, Flex-Kleen dust collector or dust collector can be operated to serve Silo 5 and Melt System Rework Hopper #5

- (3) Flex-Kleen dust collector (MPAC-3566), identified as Unit 32, constructed in 1990, modified in 2001 and 2008, serves Silo 6 and Melt System Rework Hopper #6. The dust collector exhausts through Stack 4A. For maintenance operations, Flex-Kleen dust collector or dust collector can be operated to serve Silo 6 and Melt System Rework Hopper #6.
 - (4) Flex-Kleen dust collector (MPAC-2574), identified as Unit 31, constructed in 1990, modified in 2001 and 2008, serves Silo 7 and Melt System Rework Hopper #7. This dust collector exhausts through Stack 3A. For maintenance operations, Flex-Kleen dust collector or dust collector can be operated to serve Silo 7, the Transfer Silo, and Melt System Rework Hopper #7.
- (b) One (1) Soap Noodle Silo, identified as Transfer Silo and four (4) Rework Hoppers, identified as Rework Hopper #4, Rework Hopper #5, Rework Hopper #6 and Rework Hopper #7, constructed in 1990, each with a maximum capacity of 5,480 pounds per hour, connected to a common exhaust header and controlled by dust collectors as described below:
- (1) Flex-Kleen dust collector (MPAC-2362), identified as Unit 36, constructed in 1990, modified in 2009, serves the Transfer Silo Rotary Valve, Rework Hoppers #4, #5, #6, and #7. The dust collector exhausts through Stack 8A. For maintenance, dust collector MPAC-2362 can serve to replace the operations of one of the following dust collectors: MPAC-1956, MPAC-1947, MPAC-3566 or MPAC-2574 .
- (c) Four (4) Chip Mixers, constructed in 1985, identified as Chip Mixer No. 4, Chip Mixer No. 5 , Chip Mixer No. 6 and Chip Mixer No. 7, each with a maximum capacity of 5,480 pounds of soap per hour, controlled by a aspiration filters #9668, #9669, #9670 and #9671, respectively, exhausting indoors only.

Bagging Operation - Building 5

Soap Noodle Bagging Silo Dust Collector (DC-31613), constructed in 2003, located in Building 5, used to control soap dust from the transfer of soap noodles to silo TK-31610, with a maximum capacity of 11,000 tons per year, and exhausting to Stack 30.

- 3) Manufacturing Processes controlled by wet scrubber systems:
 - (a) DR Technologies Wet Scrubber/Demister Collection System "North Scrubber" controlling four (4) liquid Drais mixers, two (2) reactors (constructed in 1990), a

nitrogen blanket (serving reactors, strippers, and buffer tank), hotwells, identified as Unit 30. In case of a rupture disk failure, emissions from the knockout tanks H-30675 and H-30676 will also be controlled by this system. The system also includes four (4) melt tank vents for lines 4-7 for housekeeping purposes. The Scrubber/Demister system has a maximum capacity of 8,968 lbs/hr of fatty acid material and exhausts to Stack 2A.

(b) Schneible Wet Scrubber/Demister Collection System "South Scrubber"

controlling three (3) liquid Drais mixers, two (2) reactors (constructed in 1985), a nitrogen blanket (serving reactors, strippers, and buffer tank), identified as Unit 17. In case of a rupture disk failure, emissions from knockout tanks H-30673, H-30674 and DEFI making are controlled by this system. This system also includes six (6) melt and hold tank vents for lines 1, 2, & 3 for housekeeping purposes. The Scrubber/Demister system has a maximum capacity of 5,736 lbs/hr of fatty acid material handled and exhausts to Stack 19.

The following is a list of the emission units removed from the source.

- (a) Soap Rework Grinding Process, identified as Unit 11, constructed in 1979, controlled by a dust collection system, with a maximum capacity of 4,167 pounds per hour and exhausting to Stack 13.
- (b) One (1) vacuum system soap dryer, identified as part of Unit 12, has been taken out of service. Two vacuum soap dryers remain in service.
- (c) Powder Dye Mixing System, identified as Unit 24, constructed in 1985, controlled by a dust collection system (DC-4), with a maximum capacity of 100 pounds per hour and exhausting to Stack 26.
- (d) Flex-Kleen Dust Collector System (DC-1052), identified as Unit 35, constructed in 1990, used to control the exhaust from pick-up points along Bar Soap Finishing Lines #4 and #5. Pick-up points are distributed for maximum dust reduction along the lines including plodder/extruder hoppers, duplex refiners, apron/screw conveyors, incline conveyors, pelletizing refiners, noodle hoppers, and chip mixers, rework grinder and the TiO₂ dump station. The unit has a maximum capacity of 5,976 pounds per hour and exhausts to stack 7A.
- (e) Fuel Oil Day Tank, identified as Unit 62, constructed in 2001, with a maximum design capacity of 18,000 gallons, containing No. 6 Fuel Oil with a true vapor pressure less than 0.00004 psia at 60 degrees F.
- (f) Dust collector DC-3.
- (g) Tallow Emission Units - Building 14
 - (1) Two (2) Vacuum System Soap Dryers, constructed in 1979, identified as Unit 12, with a combined maximum throughput of approximately 19,000 pounds of soap per hour (9,500 pounds per hour each), controlled by a bag collector identified as DC-3, exhausting to Stack 14.
 - (2) Tallow Storage Silos 8 & 9 (optional), 10, 11 & 12, one (1) bagging station silo,

two (2) rework systems, and one (1) scrap soap kettle, constructed in 1979, identified as Unit 13, with a maximum capacity of 32,880 pound pounds of soap per hour, controlled by a bag collector located in Soapery - Building #3, exhausting to Stack 15. Silo #8 and #9 are also connected in series to the Torit Dust Collector that exhausts through Stack 17A for the case of running different soap product.

- (3) Tallow Finishing Lines 8 & 9, Chip Mixer 10, identified as Units 14 and 15, constructed in 1979 and re-configured in 2002 and 2005, controlled by three dust collectors with a maximum rate of 59,000 pounds per hour, all exhausting to Stack 16. Tallow Finishing Lines 11 and 12 are controlled by dust collectors DC-11 and DC-12 exhausting through Stack #17; Silo #12 can connect to the Flex Clean Dust Collector that exhausts through Stack #46 but no longer operates in that configuration.
- (4) Tallow Line 8 controlled by dust collector, identified as Unit 48, constructed in 1979 and reconfigured in 2005, with a maximum capacity of 10,000 lbs per hour and exhausting to Stack 17A.

Insignificant activities consisting of the following:

- (a) The following VOC and HAP storage containers subject to 326 IAC 8-3:
 - A) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons. (Building 14 dye mixing tanks)
 - B) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids. [326 IAC 2-7-1(G)(iii)(AA)&(BB)]
- (b) Production related activities, including application of oils, greases, lubricants, and nonvolatile materials as temporary protective coatings; degreasing operations that do not exceed 145 gallons per 12 months; brazing, cutting torches, soldering and welding; and closed loop heating and cooling systems. [326 IAC 2-7-1(21)(G)(vi)(AA),(CC),(EE)&(FF)][326 IAC 8-3]
- (c) Cleaners and solvents, subject to 326 IAC 8-3, characterized as follows:
 - A) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;
 - B) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months. [326 IAC 2-7-1(21)(G)(vi)(DD)]
- (d) Emergency generators as follows:

One (1) natural gas-fired Powerhouse Generator with a maximum capacity of 450 horsepower.
[326 IAC 2-7-1(21)(G)(xxii)(BB)] [Affected Facilities under 40 CFR 63, Subpart ZZZZ]
- (e) Two (2) laboratories. [326 IAC 2-7-1(21)(D)]

- (f) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour. [326 IAC 2-7-1(21)(G)(i)(BB)]
- (g) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons. [326 IAC 2-7-1(21)(G)(ii)(AA)]
- (h) Noncontact cooling tower systems with either of the following:
Natural draft cooling towers not regulated under a NESHAP.
Forced and induced draft cooling tower system not regulated under a NESHAP.
[326 IAC 2-7-1(G)(ix)(FF)]
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment. [326 IAC 2-7-1(21)(G)(x)(AA)]
- (j) Heat exchanger cleaning and repair. [326 IAC 2-7-1(G)(x)(BB)]
- (k) Paved and unpaved roads and parking lots with public access.
[326 IAC 2-7-1(21)(G)(xiii)]
- (l) Asbestos abatement projects regulated by 326 IAC 14-10.
[326 IAC 2-7-1(21)(G)(xvi)]
- (m) Routine maintenance and repair of buildings. [326 IAC 2-7-1(21)(G)(xvii)]
- (n) Flue gas conditioning systems and associated chemicals.
[326 IAC 2-7-1(21)(G)(xviii)]
- (o) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup. [326 IAC 2-7-1(21)(G)(xix)]
- (p) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower. [326 IAC 2-7-1(G)(xx)(AA)-(EE)]
- (q) On-site fire and emergency response training approved by the department.
[326 IAC 2-7-1(G)(xxii)(AA)]
- (r) Other emergency equipment as follows:
Stationary, diesel fire pumps and rental air compressor.
[326 IAC 2-7-1(21)(G)(xxii)(CC)]
- (s) Coalescer media changeout. [326 IAC 2-7-1(21)(G)(xxv)]

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	592.89
PM10 ⁽¹⁾	448.05
PM2.5	448.05
SO ₂	0.58
NO _x	95.49
VOC	6.43
CO	80.22

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
hexane	1.72
TOTAL HAPs	1.80

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM10 and PM2.5 is greater than one hundred (100) tons per year and the PTE of VOC is greater than twenty-five (25) tons per year in Lake County. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

PTE of the Entire Source After Issuance of the FESOP

The table below summarizes the potential to emit of the entire source after issuance of this FESOP, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)								
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Boilers	1.82 *	7.26 *	7.26 *	0.58 *	95.49 *	6.43 *	80.22 *	1.80 *	1.72 * - hexane
Emission Units Controlled by Wet Scrubbers	90.24 *	9.02 ***	9.02 ****	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *
Southside (Bldg. 15)	149.00 **	54.40 ***	54.40 ****	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *
Northside (Bldg. 15A)				0.00 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *
Bagging Operation (Bldg. 5)	8.42 *	2.72 ***	5.89 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *	0.00 *
Total PTE of Entire Source	249.48	73.4	76.57	0.58	95.49	6.43	80.22	1.80	1.72 - hexane
PSD Major Source Thresholds	250	250	NA	250	250	250	250	NA	NA
Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". * Emissions are unlimited ** Limits are pursuant to 326 IAC 2-2 *** Limits are pursuant to 326 IAC 6.8 **** Limits are pursuant to 326 IAC 2-1.1.5									

(a) FESOP Status

This existing source is a FESOP source because PTE of all criteria pollutants are limited to less than 100 tons per year and the potential to emit HAPs is less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

The source shall comply with the following:

- (1) PM10 emissions from the DR Technologies Wet Scrubber/Demister Collection System, identified as the "North Scrubber," shall not exceed 1.03 lbs/hr.

- (2) PM2.5 emissions from the Schneible Wet Scrubber/Demister Collection System, identified as the "South Scrubber," shall not exceed 1.03 lbs/hr.
- (3) PM10 emissions from the Schneible Wet Scrubber/Demister Collection System, identified as the "South Scrubber," shall not exceed 1.03 lbs/hr.
- (4) PM2.5 emissions from the DR Technologies Wet Scrubber/Demister Collection System, identified as the "North Scrubber," shall not exceed 1.03 lbs/hr.
- (5) Combined PM10 emissions from Building 15 and Building 15A emission units shall not exceed 12.42 lbs/hr.
- (6) Combined PM2.5 emissions from Building 15 and Building 15A shall not exceed 12.42 lbs/hr.

Compliance with these limits and the limits established below, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable to the entire source, and will make this source a minor source under TV, PSD and Nonattainment New Source Review.

(b) PSD Minor Source

This existing source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM, PM10, and PM2.5 is limited to less than 250 tons per year and the potential to emit all other attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

- (1) Combined PM emissions from Building 15 and Building 15A emission units shall not exceed 34.01 lbs/hr.

Compliance with this limit and the limits established above, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and shall make the source a minor source under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) Powerhouse Boiler No.1, identified as Unit No. 49, constructed in 1995 with a maximum heat input capacity of 98.3 MMBtu/hr, is subject to the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c, Subpart Dc, which is incorporated by reference in 326 IAC 12. Although Powerhouse Boiler No.1 was previously permitted at a maximum heat input capacity of 120 MMBtu/hr, the maximum heat input capacity of the boiler is actually 98.3 MMBtu/hr. The source submitted manufacturer's information stating that the boiler was designed to operate at 98.3 MMBtu/hr in order to verify this. The unit subject to this rule is:

- (1) Powerhouse Boiler No. 1, identified as Unit No. 49, constructed in 1995 with a maximum capacity of 98.30 MMBtu per hour, natural gas-fired, NOx emissions are controlled with low

NOx burners and flue gas recirculation and monitored by a NOx CEM, exhausting to Stack 1. [Under 40 CFR 60, Subpart Dc, Powerhouse Boiler No.1 is an affected facility.]

Powerhouse Boiler No.1 is subject to the following portions of Subpart Dc:

- (1) 40 CFR 60.40c
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.48c(a)
- (4) 40 CFR 60.48c(g)(1)-(2)
- (5) 40 CFR 60.48c(i)

- (b) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.420, Subpart IIII, are not included in the permit for the generators. Construction of these units commenced prior to 2007 and the engines do not displace more than 30 liters per cylinder.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The emergency generators are subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ. Although the generators are subject to this rule, the units are not subject to any emission limitation or standard. The source is only required to submit an initial notification. The generators are subject to the following provisions of Subpart ZZZZ:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585(a), (c)
- (3) 40 CFR 63.6590 (a)(1), (a)(3), (b)(3), (c)
- (4) 40 CFR 63.6595(a)(1), (c)
- (5) 40 CFR 63.6603 (a)
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625 (e), (f), (h), (i)
- (8) 40 CFR 63.6640
- (9) 40 CFR 63.6645 (f)
- (10) 40 CFR 63.6655 (a)(4), (a)(5), (e), (f)
- (11) 40 CFR 63.6660
- (12) 40 CFR 63.6665
- (13) 40 CFR 63.6670
- (14) 40 CFR 63.6675

Compliance Assurance Monitoring (CAM)

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

- (c) **PM2.5 nonattainment counties, 326 IAC 2-1.1-5 (Nonattainment New Source Review)**
Nonattainment New Source Review applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (d) **326 IAC 2-6 (Emission Reporting)**
Since this source is located in Lake County, and has actual emissions of NOx or VOC greater than or equal to twenty-five (25) tons per year, an emission statement covering the previous calendar year must be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.
- (e) **326 IAC 5-1 (Opacity Limitations)**
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) 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.
- (f) **326 IAC 6-4 (Fugitive Dust Emissions Limitations)**
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.
- (g) **326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**
Although the source is located in Lake County, there are no fugitive emission source with the potential to emit 25 tons per year or more of particulate. Therefore, the requirements of 326 IAC 6-5 do not apply.
- (h) **326 IAC 6.8 and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**
The emission units located at this source are subject to emission limitations in accordance with 326 IAC 6.8 and 326 IAC 6-3-2; therefore, the most stringent of these rules will apply to each individual emission unit. The detailed emission calculations attached to this TSD show the particulate matter emissions from 326 IAC 6.8 are more restrictive; therefore, emission limitations in accordance with 326 IAC 6-3-2 will not be included in this permit.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)

This rule applies to sources or facilities located in Lake County that are specifically listed in the rule or sources or facilities located in Lake County with the potential to emit one hundred (100) tons or more or actual emission of ten (10) tons or more of particulate matter per year. Conopco, Inc. d/b/a Unilever HPC USA is specifically listed in 326 IAC 6.8-2-35; therefore, this source is subject to 326 IAC 6.8.

The following emission limits apply to this source:

Particulate Matter Limitations [326 IAC 6.8] - Boilers			
Emission Unit	Building	Stack ID	Emission Limits

	Location		(lb/MMBtu)	(lb/hr)
American Hydrotherm Boiler No. 1	Burn Natural Gas Only			
Babcock-Wilcox Boiler No. 4	---	2	0.116	18.88
American Hydrotherm Boiler No. 2	---	1A	0.150	1.830
Powerhouse Boiler No. 1	---	1	0.01 g/dscf	---

Particulate Matter Limitations (PM10) [326 IAC 6.8] – Wet Scrubbers				
Emission Unit	Building Location	Stack ID	Emission Limits	
			(g/dscf)	(lb/hr)
Schenible Wet Scrubber Collection System	15	19	0.030	1.03
D.R. Technology Wet Scrubber Collection System	15A	2A	0.030	1.03

Particulate Matter Limitations (PM) [326 IAC 6.8] – Building 5				
Emission Unit	Building Location	Stack ID	Emission Limits	
			(g/dscf)	(lb/hr)
Soap Noodle Bagging Silo Dust Collector (DC-31613)	5	30	0.03	0.62

Particulate Matter Limitations (PM10) [326 IAC 6.8] – Building 15				
Emission Unit	Building Location	Stack ID	Emission Limits	
			(g/dscf)	(lb/hr)
Soap noodle bins numbers 1, 2 and 3 dust collection system	15	28 and 29	0.020	0.63 total
Chip Mixer No. 1, Chip Mixer No. 2, and Chip Mixer No. 3	15	---	0.020	0.720
Particulate Matter Limitations (PM10) [326 IAC 6.8] – Building 15A				
Emission Unit	Building	Stack ID	Emission Limits	

	Location		(g/dscf)	(lb/hr)
Flex Kleen dust collection MPAC-2574, stack 3A, building 15A	15A	3A	0.020	0.940
Flex Kleen dust collection MPAC-3566, stack 4A, building 15A	15A	4A	0.020	0.940
Flex Kleen dust collection MPAC-1947, stack 5A, building 15A	15A	5A	0.020	0.940
Flex Kleen dust collection MPAC-1956, stack 6A, building 15A	15A	6A	0.020	0.940
Flex Kleen dust collection MPAC-2362, stack 8A, building 15A	15A	8A	0.020	2.130

Because the source has reorganized and renamed emission units, compliant limits have been determined in order to demonstrate compliance with these limits. All stacks in building 15 and 15A have a limit of 0.02 g/dscf and these limits are maintained in the compliant limits.

326 IAC 7-4.1-19 Unilever HPC USA Sulfur Dioxide Emission Limitations

Pursuant to 326 IAC 7-4.1-19, Conopco, Inc. d/b/a Unilever HPC USA shall comply with the sulfur dioxide emission limits in pounds per million British thermal units (lb/MMBtu) and pounds per hour as follows:

- (a) Babcock-Wilcox Boiler No. 4 shall be limited to one and fifty-two hundredths (1.52) lb SO₂ per MMBtu;
- (b) Powerhouse Boiler No. 1 shall be limited to five-tenths (0.5) lb SO₂ per MMBtu and forty nine and fifteen hundredths (49.15) pounds SO₂ per hour; and
- (c) American Hydrotherm Boiler No. 2 shall be limited to three-tenths (0.3) lb SO₂ per MMBtu and three and sixty-six hundredths (3.66) lb SO₂ per hour.

326 IAC 8-3 (Organic Solvent Degreasing Operations)

This rule applies to new sources constructed after January 1, 1980, performing organic solvent degreasing operations located anywhere in the state. Therefore, this rule applies to the solvent degreasing operations located at this source.

326 IAC 6.8-8 (Lake County: Continuous Compliance Plan)

This rule requires sources located in Lake County and specifically listed in 326 IAC 6.8-8-1 to submit a continuous compliance plan to the Indiana Department of Environmental Management, Office of Air Quality by December 10, 1993. Conopco, Inc. d/b/a Unilever HPC USA is listed in 326 6.8-8-1; therefore, the requirements of 326 IAC 6.8-8 apply to this source.

326 IAC 6.8-11 (Lake County: Particulate Matter Contingency Measures)

Conopco, Inc. d/b/a Unilever HPC USA is specifically listed in 326 IAC 6.8-2; therefore, this rule applies to this source.

Compliance Determination, Monitoring and Testing Requirements
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- (a) As discussed under 326 IAC 6.8, compliant limits have been established for this source in order to

comply with the limits pursuant to 326 IAC 6.8. Below are these compliant limits, reflecting the current labeling system and source configuration.

Compliance Demonstration Method for Particulate Matter Limitations [326 IAC 6.8]			
Emission Unit	Stack ID	Emission Limits	
Building 15/15A emission units	Stack 3A, Stack 4A, Stack 5A, Stack 6A, Stack 8A, Stack 28 and Stack 29	0.02 gr/dscf each stack (PM10)	12.42 lb/hr (PM10 for all stacks combined)

(b) Compliance determination requirements are as follows.

Emission Unit	Parameter	Frequency
Three Soap Noodle Silos (Unit 18, 19, 20)	Operation of Baghouse	At all times process is in operation.
Four Soap Noodle Silos (Unit 26)	Operation of Baghouse	At all times process is in operation.
Soap Noodle Silo (TK-31610)	Operation of Baghouse	At all times process is in operation.
DR Technology Collection System	Operation of North Scrubber	At all times process is in operation
Schneible Collection System	Operation of South Scrubber	At all times process is in operation

(c) Testing requirements are as follows.

Summary of Testing Requirements				
Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing
DR Technology Collection	North Scrubber, Unit 30	Every five years	Particulate Matter (PM/PM10/PM2.5)	Every Five Years

Summary of Testing Requirements				
Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing
System				
Schneible Collection System	South Scrubber, Unit 17	Every five years	Particulate Matter (PM/PM10/PM2.5)	Every Five Years

(d) Compliance monitoring requirements are as follows.

Control	Parameter	Frequency	Range	Excursions and Exceedances
North and South Scrubber	Pressure Drop	Continuous Control	0.5" to 12" Water	Reasonable Response Steps
MPAC-2578	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	
MPAC-2576	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	
MPAC-1956	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	
MPAC-1947	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	
MPAC-2362	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	
MPAC-3566	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	
MPAC-2574	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	
DC-31613	Pressure Drop	Once per Day	1" to 8" Water	Reasonable Response Steps
	VE Notations		Normal or Abnormal	

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on

July 17, 2006

The operation of this source shall be subject to the conditions of the attached proposed FESOP No. 089-23372-00229. The staff recommends to the Commissioner that this FESOP be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jillian Bertram at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317)233-1782 or toll free at 1-800-451-6027 extension 3-1782.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Company Name: **Conopco, Inc. d/b/a/ Unilever HPC USA**
 Address: **1200 Calumet Avenue, Hammond, Indiana 46320**
 Permit Number: **089-23372-00229**
 Reviewer: **Jillian Bertram**
 Date: **October 5, 2009**

Potential to Emit after Issuance (TPY) - Sourcewide Summary									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Boilers	1.82	7.26	7.26	0.58	6.43	80.22	95.49	1.72	1.80
Wet Scrubbers	90.24	9.02	9.02	0.00	0.00	0.00	0.00	0.00	0.00
Southside (Bldg. 15)	149.00	54.40	54.40	0.00	0.00	0.00	0.00	0.00	0.00
Northside (Bldg. 15A)				0.00	0.00	0.00	0.00	0.00	0.00
Bagging Operation (Bldg. 5)	8.42	2.72	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Total Potential to Emit	249.48	73.40	76.57	0.58	6.43	80.22	95.49	1.72	1.80
Major Source Threshold PSD	250	250	---	250	250	250	250	---	---
Major Source Threshold NA-NSR	---	---	100	---	---	---	---	---	---

**Appendix A: Emission Calculations
Uncontrolled Potential to Emit Summary**

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit (TPY) - Boilers									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Babcock-Wilcox Boiler No. 4	0.69	2.74	2.74	0.22	1.99	30.32	36.09	0.65	0.68
American Hydrotherm Boiler No. 1	0.10	0.41	0.41	0.03	0.29	4.50	5.35	0.10	0.10
American Hydrotherm Boiler No. 2	0.21	0.84	0.84	0.07	0.60	9.23	10.99	0.20	0.21
Powerhouse Boiler No. 1	0.82	3.27	3.27	0.26	3.55	36.17	43.06	0.77	0.81
Subtotal Boilers	1.82	7.26	7.26	0.58	6.43	80.22	95.49	1.72	1.80

Potential to Emit (TPY) - Wet Scrubbers									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Schenible Wet Scrubber System	45.12	45.12	45.12	0.00	0.00	0.00	0.00	0.00	0.00
D.R Technology Wet Scrubber System	45.12	45.12	45.12	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Wet Scrubbers	90.24	90.24	90.24	0.00	0.00	0.00	0.00	0.00	0.00

Potential to Emit (TPY) - Bagging Operation - Building 5									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Bagging Silo Dust Collector (MPAC #6557)	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Building 5	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00

(Continued on next page)

**Appendix A: Emission Calculations
Uncontrolled Potential to Emit**

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit (TPY) - Southside Emission Units - Building 15									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Soap Noodle Silo #1	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #2	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #3	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #1	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #2	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #3	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Bagging Station	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Building 15	206.39	144.46	144.46	0.00	0.00	0.00	0.00	0.00	0.00

Potential to Emit (TPY) - Northside Emission Units - Building 15A									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Soap Noodle Silo #4	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #5	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #6	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Soap Noodle Silo #7	43.70	30.59	30.59	0.00	0.00	0.00	0.00	0.00	0.00
Transfer Silo	21.77	15.24	15.24	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #4	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #5	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #6	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
Chip Mixer #7	22.29	15.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00
TiO ₂ Dump Station	0.29	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal Building 15A	286.02	200.20	200.20	0.00	0.00	0.00	0.00	0.00	0.00

(Continued on next page)

Notes:

- 1) No information is available for PM2.5. All PM10 is assumed to be PM2.5.

Company Name: **Conopco, Inc. d/b/a/ Unilever HPC USA**
 Address: **1200 Calumet Avenue, Hammond, Indiana 46320**
 Permit Number: **089-23372-00229**
 Reviewer: **Jillian Bertram**
 Date: **October 5, 2009**

Potential to Emit (TPY) - Sourcewide Summary									
Emission Unit	PM	PM10	PM2.5	SO2	VOC	CO	NOx	Single HAP	Total HAP
Boilers	1.82	7.26	7.26	0.58	6.43	80.22	95.49	1.72	1.80
Wet Scrubbers	90.24	90.24	90.24	0.00	0.00	0.00	0.00	0.00	0.00
Southside (Bldg. 15)	206.39	144.46	144.46	0.00	0.00	0.00	0.00	0.00	0.00
Northside (Bldg. 15A)	286.02	200.20	200.20	0.00	0.00	0.00	0.00	0.00	0.00
Bagging Operation (Bldg. 5)	8.42	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00
Total Potential to Emit	592.89	448.05	448.05	0.58	6.43	80.22	95.49	1.72	1.80

Notes:

- 1) No information is available for PM2.5. All PM10 is assumed to be PM2.5.
- 2) The highest HAP is methanol and comes from the soap drying process.
- 3) The December 1993 rule change to the LEAR/EO requirements lowered the threshold of the level of emissions that trigger review as a major modification for severe nonattainment areas from 100 to 25 tons per year of VOCs.

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Non-HAP Emissions
MM BTU/HR <100
Babcock-Wilcox Boiler No. 4

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

82.40

721.82

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.69	2.74	0.22	36.09	1.99	30.32

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only - HAP Emissions
MM BTU/HR <100
Babcock-Wilcox Boiler No. 4

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	7.579E-04	4.331E-04	2.707E-02	6.496E-01	1.227E-03

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.805E-04	3.970E-04	5.053E-04	1.371E-04	7.579E-04

Worst Case HAP 0.65 tpy (Hexane)
 Total HAPs 0.68 tpy

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
 Natural Gas Combustion Only - Non-HAP Emissions
 MM BTU/HR <100
 American Hydrotherm Boiler No. 1**

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

12.22

107.05

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.10	0.41	0.03	5.35	0.29	4.50

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only - HAP Emissions
MM BTU/HR <100
American Hydrotherm Boiler No. 1

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.124E-04	6.423E-05	4.014E-03	9.635E-02	1.820E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.676E-05	5.888E-05	7.494E-05	2.034E-05	1.124E-04

Worst Case HAP 0.10 tpy (Hexane)
 Total HAPs 0.10 tpy

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Non-HAP Emissions
MM BTU/HR <100
American Hydrotherm Boiler No.2

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

25.10

219.88

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.21	0.84	0.07	10.99	0.60	9.23

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only - HAP Emissions
MM BTU/HR <100
American Hydrotherm Boiler No.2

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.309E-04	1.319E-04	8.246E-03	1.979E-01	3.738E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	5.497E-05	1.209E-04	1.539E-04	4.178E-05	2.309E-04

Worst Case HAP 0.20 tpy (Hexane)
 Total HAPs 0.21 tpy

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Natural Gas Combustion Only - Non-HAP Emissions
MMBTU/HR < 100
Powerhouse Boiler No. 1

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Heat Input Capacity
MMBtu/hr

98.30

Potential Throughput
MMCF/yr

861.11

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	1.90	7.60	0.60	100.00	8.250	84.0000
	0.82	3.27	0.26	43.06	3.55	36.17

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

Notes:

- 1) Emission factors for CO, SO2, PM and PM10 are from AP-42, Chapter 1.4, Table 1.4-2, SCC 1-02-006-01.
- 2) The emission factor for NOx is based on AP-42, Chapter 1.4, Table 1.4-2, SCC 1-02-006-01 for boilers without low NOx burners and FGR. The source has low NOx burners and flue gas recirculation but is not taking credit for the reduction in NOx.
- 3) The emission factor for VOC is based on AP-42, Chapter 1.4, Table 1.4-2, SCC 1-02-006-01 for boilers with low NOx burners and FGR. The emission factor shown above is the AP-42 emission factor of 5.5 lb/MMBtu with a safety factor of 1.5.

Methodology:

- 1) All emission factors are based on normal firing.
- 2) MMBtu = 1,000,000 Btu
- 3) MMCF = 1,000,000 Cubic Feet of Gas
- 4) Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hr/yr x 1 MMCF/ 1,000 MMBtu

Appendix A: Emission Calculations
Natural Gas Combustion Only - HAP Emissions
MMBTU/HR < 100
Powerhouse Boiler No. 1

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	9.04E-04	5.17E-04	3.23E-02	7.75E-01	1.46E-03

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.15E-04	4.74E-04	6.03E-04	1.64E-04	9.04E-04

Worst Case HAP 0.77 TPY (Hexane)
 Total HAPs 0.81 TPY

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Particulate Matter Emissions - Units Controlled by Scrubbers

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Limited Potential to Emit				
Emission Unit	Air Flow (dscfm)	Allowable Grain Loading (g/dscf)	Limited PM / PM10/ PM2.5 (lb/hr)	Limites PM / PM10 / PM2.5 (TPY)
Schenible Wet Scrubber (South Scrubber)	4,005.00	0.03	1.03	4.51
D.R. Technology Wet Scrubber (North Scrubber)	4,005.00	0.03	1.03	4.51
		Subtotal	2.06	9.02

Potential to Emit				
Emission Unit	Controlled Emissions (lb/hr)	Control Efficiency	Controlled PM / PM10/ PM2.5 (lb/hr)	Controlled PM / PM10 / PM2.5 (TPY)
Schenible Wet Scrubber (South Scrubber)	1.03	90.00%	10.30	45.12
D.R. Technology Wet Scrubber (North Scrubber)	1.03	90.00%	10.30	45.12
		Subtotal	20.60	90.24

Notes:

- 1) In accordance with 326 IAC 6.8-2-35, the particulate matter emissions from each scrubber is limited to 0.03 g/dscf and 1.03 lb/hr for each scrubber. Allowable emissions are based on a projected dry air flow rate of 4,005 dcfm.
- 2) The Schenible Wet Scrubber (South Scrubber) controls the following emission units: Three (3) drais mixers, two (2) reactors, three (3) melt tanks and three (3) hold tank vent lines for lines 1, 2 and 3.
- 3) The D.R Technology Wet Scrubber (North Scrubber) controls the following emission units: Four (4) drais mixers, two (2) reactors, four (4) DEFI hot wells and four (4) melt tanks for lines 4, 5, 6 and 7.
- 4) PM is assumed to be equal to PM10 for these emission units. PM10 is assumed to equal PM2.5.

Methodology:

- 1) Limited PTE PM/PM10/PM2.5 (lb/hr) = Air Flow (dscfm) x Grain Loading (g/dscf) x (1 lb / 7,000 g) x (60 min / hr)
- 2) Limited PTE PM/PM10/PM2.5 (TPY) = PTE PM/PM10/PM2.5 (lb/hr) x 8,760 hr/yr x (1 ton / 2,000 lb)
- 3) PTE PM/PM10/PM2.5 (lb/hr) = PTE PM/PM10/PM2.5 (lb/hr) (1 - Removal Efficiency)
- 4) PTE PM/PM10/PM2.5 (TPY) = PTE PM/PM10/PM2.5 (TPY) (1 - Removal Efficiency)

Appendix A: Emission Calculations
Uncontrolled PTE of Particulate Matter - Buildings 5 & 15

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit - Southside in Building 15									
Description	MPAC #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Soap Noodle Silo #1	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #2	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #3	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Chip Mixer #1	7057	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr
Chip Mixer #2	2370	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr
Chip Mixer #3	2371	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr
Chip Bagging Station	---	11,000.00	ton/yr	1.070000	lb PM10/ton	1.3437	5.89	8.42	SCC3-05-016-27, AP-42, Table 11.17-2
Subtotal						144.46	206.39		

Potential to Emit - Southside in Building 5									
Description	MPAC #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Bagging Silo Dust Collector (MPAC #6557)	MPAC #6557	11,000.00	tons/yr	1.07	lb PM10/ton	1.3437	5.89	8.42	SCC3-05-016-27, AP-42, Ch 11.17, Table 11.17-2
Subtotal						5.89	8.42		

Potential to Emit - Trivial Emission Units - Southside Building 15									
Description	MPAC #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Roll Mill #1	Trivial	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.0022	0.0031	10/01/08 Stack Test @ 5,611 lb/hr
Roll Mill #2	Trivial	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.0022	0.0031	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #3	Trivial	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.0022	0.0031	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #1	Trivial	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.0026	0.0037	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #2	Trivial	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.0026	0.0037	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #3	Trivial	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.0026	0.0037	10/01/08 Stack Test @ 5,611 lb/hr
Subtotal						0.0144	0.0204		

Notes:

- The source stated as part of its application that all DEFI building emission units operate in a batch mode and are process limited by the drais mixing operations. There are a total of seven mixers and produce on average 132 to 135 batches per day. There are four north drais mixers capable of processing approximately 75 batches of material weighing 7,014 lb/batch per day. The process throughput of all northside emission units after the drais mixers has been updated to indicate a maximum bottlenecked production of 5,480 lb soap per hour. There are three southside drais mixers capable of processing approximately 63 batches of material weighing 6,230 lb/batch. The process throughput of all southside emission units after the drais mixers has been updated to indicate a maximum bottlenecked production of 5,450 lb soap per hour. Worst case throughput of 4,580 lb/hr was used in emission calculations for all DEFI building emission units.
- The post control emission factor for the soap noodles was measured at an operating rate of 11,000 lb soap per hour. The source wishes to be able to fill noodle silos #1 to #7 in the DEFI building using the output of two drais mixers. The post-control emission factor measured on November 18, 2004 for a single soap noodle silo was 0.00127 lb PM10 / ton soap. The pre-control emission factor was estimated and the methodology is shown below.
- Emissions from stack test were for PM10 only. PM10 emissions were assumed to be 70% of total PM emissions.
- Trivial emission units are not required to be included in the Part 70 Operating Permit and are not included in the subtotal above. Emissions from trivial units are shown in this spreadsheet to verify their status. In accordance with 326 2-7-1(40)(A)(ii)(FF), uncontrolled PM10 emissions from these sources is less than one pound per day.
- Where previous emission unit number was not assigned, the MPAC number is sighted.
- The emission factors for the incline and screw conveyors is based on emission testing conducted on dust collector DC-1052 on September 15, 2009. The test showed a controlled emission factor for PM10 of 0.017 lb/ton. Duct collector DC-1052 controlled emissions from chill rolls #4 to #7, pelletizers #4 to #7, refiners #4 to #7 and incline and screw conveyors #4 to #7 at the time of the test. The emission factor for the incline screw and conveyors shown above was estimated by assuming all emissions in the stack test originated from a single incline and screw conveyor with a baghouse operating at 50% efficiency.

Methodology:

- Pre-Control Emission Factor = (Stack Test Emission Factor) (1 - 99.9%)
- PM Emissions (TPY) = PM10 Emissions (TPY) / 0.70 [Where PM10 is assumed to equal PM2.5.]
- PM10 Emissions (lb/hr) = Capacity (lb soap/hr) x Emission Factor (lb PM10/ton soap) / (2,000 lb soap/ton soap)
- PM10 Emissions (TPY) = PM10 Emissions (lb/hr) x (8,760 hr/yr) / (2,000 lb PM10/ton PM10)
- PM10 Emissions (lb/hr) = Capacity (ton soap/yr) x Emission Factor (lb PM10/ton soap) / (8,760 hr/yr)

Appendix A: Emission Calculations
Uncontrolled PTE of Particulate Matter - Building 15A

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Potential to Emit - Northside in Building 15A									
Description	MPAC # or Unit #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Soap Noodle Silo #4	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #5	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #6	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Soap Noodle Silo #7	---	11,000.00	lb/hr	1.270000	lb PM10/ton	6.9850	30.59	43.70	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Transfer Silo	---	5,480.00	lb/hr	1.270000	lb PM10/ton	3.4798	15.24	21.77	11/18/2004 Stack Test @ 11,000 lb/hr (Note 2)
Chip Mixer #4	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
Chip Mixer #5	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
Chip Mixer #6	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
Chip Mixer #7	---	5,480.00	lb/hr	1.300000	lb PM10/ton	3.5620	15.60	22.29	5/7/2003 Stack Test @ 2,995 lb/hr (Note #3)
TiO ₂ Dump Station	---	2,380.00	lb/hr	0.038000	lb PM10/ton	0.0452	0.20	0.29	10/02-10/04/2008 @2,384 lb/hr
Subtotal							200.20	286.02	

Potential to Emit - Trivial Emission Units - Northside Building 15A									
Description	MPAC # or Unit #	Capacity	Units of Capacity	Emission Factor	Emission Factor Units	PM10/PM2.5 Emissions (lb/hr)	PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	Emission Factor Source
Chill Roll #4	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @ 5,600 lb/hr
Chill Roll #5	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @ 5,600 lb/hr
Chill Roll #6	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @ 5,600 lb/hr
Chill Roll #7	---	5,480.00	lb/hr	0.008000	lb PM10/ton	0.0219	0.10	0.14	4/23/2008 Stack Test @ 5,600 lb/hr
Duplex Refiner #4	#2446 / #2448	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #5	#2470 / #2475	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #6	#2491	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Duplex Refiner #7	#2514	5,480.00	lb/hr	0.000176	lb PM10/ton	0.0005	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #4	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #5	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #6	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Plodder #7	---	5,480.00	lb/hr	0.000232	lb PM10/ton	0.0006	0.00	0.00	10/01/08 Stack Test @ 5,611 lb/hr
Subtotal							0.40	0.56	

Notes:

- Throughputs are bottlenecked by the drais mixers as detailed in the Northside calculations. The only units not at the bottlenecked throughput are the noodle silos and the soap dryers. In addition, tallow emission units listed above will be taken out of service in the fourth quarter of 2009 and the emissions have not been updated from the last Part 70 Operating Permit amendment issued.
- Emissions from stack tests were for PM10 only. PM10 emissions were assumed to be 70% of total PM emissions.
- Trivial emission units are not required to be included in the Part 70 Operating Permit and are not included in the subtotal above. Emissions from trivial units are shown in this spreadsheet to verify their status. In accordance with 326 2-7-1(40)(A)(ii)(FF), units with uncontrolled PM10 emissions of less than one pound per day are trivial.
- Some units were not separately listed in past permits. The emission unit identifier most closely matching is shown above or emission unit name is the new emission unit number.
- The emission factors for the incline and screw conveyors is based on emission testing conducted on dust collector DC-1052 on September 15, 2009. The test showed a controlled emission factor for PM10 of 0.017 lb/ton. Duct collector DC-1052 controlled emissions from chill rolls #4 to #7, pelletizers #4 to #7, refiners #4 to #7 and incline and screw conveyors #4 to #7 at the time of the test. The emission factor for the incline screw and conveyors shown above was estimated by assuming all emissions in the stack test originated from a single incline and screw conveyor with a baghouse operating at 50% efficiency.

Methodology:

- PM emissions (TPY) = PM10 Emissions (TPY) / 0.70 [Where PM10 is assumed to equal PM2.5]
- PM10 Emissions (lb/hr) = Capacity (lb soap/hr) x Emission Factor (lb PM10/ton soap) (2,000 lb soap/ton soap)
- PM10 (lb/hr) = PM10 Emissions (lb/hr) x 8,760 hr/yr (2,000 lb soap/ton soap)

Appendix A: Emission Calculations
Limited PTE of Particulate Matter - Buildings 5 & 15

Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009

Limited Potential to Emit - Southside in Building 15							
Description	Emission Unit ID	Uncontrolled		Overall Control Efficiency	Controlled PTE		Comments
		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	
Soap Noodle Silo #1	Unit 18	30.59	43.70	96.0%	1.22	1.75	
Soap Noodle Silo #2	Unit 19	30.59	43.70	96.0%	1.22	1.75	
Soap Noodle Silo #3	Unit 20	30.59	43.70	96.0%	1.22	1.75	
Chip Mixer #1	Unit 21	15.60	22.29	96.0%	0.62	0.89	Controlled by an aspiration filter and exhausts indoors.
Chip Mixer #2	Unit 22	15.60	22.29	96.0%	0.62	0.89	Controlled by an aspiration filter and exhausts indoors.
Chip Mixer #3	Unit 23	15.60	22.29	96.0%	0.62	0.89	Controlled by an aspiration filter and exhausts indoors.
Chip Bagging Station	Station #3	5.89	8.42	96.0%	0.24	0.34	
Chill Roll #1	Unit 25	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled
Chill Roll #2	Unit 25	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled
Chill Roll #3	Unit 25	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled
Incline and Screw Conveyor #1	Unit 25	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled
Incline and Screw Conveyor #2	Unit 25	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled
Incline and Screw Conveyor #3	Unit 25	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled
				Subtotal	#REF!	#REF!	

Limited Potential to Emit - Southside in Building 5							
Description	Emission Unit ID	Uncontrolled		Overall Control Efficiency	Controlled PTE		Comments
		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	
Bagging Silo Dust Collector (MPAC #6557)	MPAC #6557	5.89	8.42	55.0%	2.65	3.79	
				Subtotal	2.65	3.79	

Notes:

1) Uncontrolled emissions were calculated on previous spreadsheets.

Methodology:

1) Controlled Emissions = Uncontrolled Emissions (TPY) x (1- Control Efficiency)

**Appendix A: Emission Calculations
Limited PTE of Particulate Matter - Building 15A**

**Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009**

Northside in Building 15A							
Description	MPAC # or Unit #	Uncontrolled		Overall Control Efficiency	Controlled		Comments
		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)		PM10/PM2.5 Emissions (TPY)	PM Emissions (TPY)	
Soap Noodle Silo #4	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Soap Noodle Silo #5	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Soap Noodle Silo #6	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Soap Noodle Silo #7	---	30.59	43.70	96.0%	1.22	1.75	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Transfer Silo	---	15.24	21.77	96.0%	0.61	0.87	Can vent to stacks 6A, 5A, ,4A, 3A or 8A
Chip Mixer #4	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Chip Mixer #5	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Chip Mixer #6	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Chip Mixer #7	---	15.60	22.29	96.0%	0.62	0.89	Emissions are controlled by an aspiration filter
Incline and Screw Conveyor #4	---	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled and vent indoors
Incline and Screw Conveyor #5	---	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled and vent indoors
Incline and Screw Conveyor #6	---	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled and vent indoors
Incline and Screw Conveyor #7	---	#REF!	#REF!	0.0%	#REF!	#REF!	Emissions are uncontrolled and vent indoors
TiO ₂ Dump Station	---	0.20	0.29	0.0%	0.20	0.29	Emissions are uncontrolled and vent indoors
				Subtotal	#REF!	#REF!	

Notes:

1) Uncontrolled emissions were calculated on previous spreadsheets.

Methodology:

1) Controlled Emissions = Uncontrolled Emissions (TPY) x (1- Control Efficiency)

**Appendix A: Emission Calculations
326 IAC 6-3-2 Emission Limitations**

**Company Name: Conopco, Inc. d/b/a/ Unilever HPC USA
Address: 1200 Calumet Avenue, Hammond, Indiana 46320
Permit Number: 089-23372-00229
Reviewer: Jillian Bertram
Date: October 5, 2009**

- 1) Particulate matter emissions from emission units shall be limited by the following equation unless the emission limitation in 326 IAC 6.8 is more restrictive:

$$E \text{ (lb/hr)} = 4.10 \times P^{0.67}$$

Where:

P is the process weight rate in tons per hour.

E is the allowable particulate matter emission rate in pounds per hour.

Emission Unit	Throughput (lb/hr)	Uncontrolled PM10 Emissions (lb/hr)	Controlled PM10 Emissions (lb/hr)	326 IAC 6-3-2 Limit (lb/hr)	326 IAC 6.8 Limit (lb/hr)	Which is more restrictive?		
Wet Scrubbers								
Schenble Scrubber	5,480.00	10.30	1.03	8.06	1.03	326 IAC 6.8		
DR Technology Scrubber	5,480.00	10.30	1.03	8.06	1.03	326 IAC 6.8		
Building 5								
Bagging Silo (MPAC #6557)	2,512.00	1.35	0.61	4.78	0.62	326 IAC 6.8		
Building 15								
Soap Noodle Silo #1	11,000.00	6.9850	0.2794	12.85	12.42	326 IAC 6.8		
Soap Noodle Silo #2	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #3	11,000.00	6.9850	0.2794	12.85				
Chip Mixer #1	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #2	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #3	5,480.00	3.5620	0.1425	8.06				
Chip Bagging Station	2,512.00	1.3500	0.0540	4.78				
Chill Roll #1	5,480.00	0.0219	0.0219	8.06				
Chill Roll #2	5,480.00	0.0219	0.0219	8.06				
Chill Roll #3	5,480.00	0.0219	0.0219	8.06				
Incline and Screw Conveyor #1	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #2	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #3	5,480.00	1.3015	1.3015	8.06				
Building 15A								
Soap Noodle Silo #4	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #5	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #6	11,000.00	6.9850	0.2794	12.85				
Soap Noodle Silo #7	11,000.00	6.9850	0.2794	12.85				
Transfer Silo	5,480.00	3.4798	0.1392	8.06				
Chip Mixer #4	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #5	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #6	5,480.00	3.5620	0.1425	8.06				
Chip Mixer #7	5,480.00	3.5620	0.1425	8.06				
Incline and Screw Conveyor #4	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #5	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #6	5,480.00	1.3015	1.3015	8.06				
Incline and Screw Conveyor #7	5,480.00	1.3015	1.3015	8.06				
TiO2 Dump Station	2,380.00	0.0452	0.0452	4.61				



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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: C Jack Hamner
Conopco, Inc. d/b/a Unilever HPC USA
1200 Calumet Ave
Hammond, IN 46320

DATE: August 31, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
FESOP
089-23372-00229

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Brad Tieke – Plant Manager
David Jordan – Environmental Resources Management (ERM)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



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August 31, 2010

TO: Hammond Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Conopco, Inc. d/b/a Unilever HPC USA
Permit Number: 089-23372-00229

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	GHOTOPP 8/31/2010 Conopco, Inc. d/b/a Unilever HPC USA 089-23372-00229 Final		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		C Jack Hamner Conopco, Inc. d/b/a Unilever HPC USA 1200 Calumet Ave Hammond IN 46320 (Source CAATS) via confirmed delivery										
2		Brad Tieke Plt Mgr Conopco, Inc. d/b/a Unilever HPC USA 1200 Calumet Ave Hammond IN 46320 (RO CAATS)										
3		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 (Local Official)										
4		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 (Affected Party)										
5		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 (Health Department)										
6		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 (Affected Party)										
7		Hammond City Council and Mayors Office 5925 Calumet Avenue Hammond IN 46320 (Local Official)										
8		Hammond Public Library 564 State St Hammond IN 46320-1532 (Library)										
9		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)										
10		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)										
11		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 (Affected Party)										
12		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 (Affected Party)										
13		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)										
14		David Jordan Environmental Resources Management (ERM) 11350 North Meridian, Ste. 220 Carmel IN 46032 (Consultant)										
15		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)										

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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Mail Code 61-53

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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)										
2		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)										
3		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)										
4		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 (Affected Party)										
5		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 (Affected Party)										
6		Calumet Township Trustee 31 E 5th Avenue Gary IN 46402 (Affected Party)										
7		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)										
8		Gary City Council 401 Broadway # 209 Gary IN 46402 (Local Official)										
9		Ron Novak Hammond Dept. of Environmental Management 5925 Calumnet Ave. Hammond IN 46320 (Local Official)										
10		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 (Affected Party)										
11		Gitte Laasby Post Tribune 1433 E. 83rd Ave Merrillville IN 46410 (Affected Party)										
12												
13												
14												
15												

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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