



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: February 12, 2009

RE: AOC, LLC / 127-25003-00003

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
Renewal
OFFICE OF AIR QUALITY**

**AOC, LLC
2552 Industrial Drive
Valparaiso, Indiana 46383**

(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.

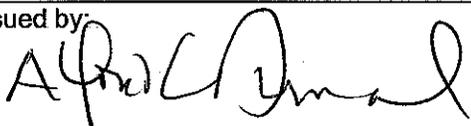
Operation Permit No.: F127-25003-00003	
Issued by:  Alfred C. Dumaul, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: February 12, 2009 Expiration Date: February 12, 2019

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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 polyester and acrylic resin source.

Source Address:	2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address:	2552 Industrial Drive, Valparaiso, Indiana 46383
General Source Phone Number:	(219) 465-4353
SIC Code:	2821
County Location:	Porter
Source Location Status:	Nonattainment for 8-hour and 1-hour ozone standards Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

- (a) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 25 million British thermal units per hour (MMBtu/hour), constructed in 1977;
- (b) One (1) hot oil heater burning natural gas and using #2 fuel oil as a back-up fuel, with a rated heat capacity of 18 MMBtu per hour, constructed in 1973;
- (c) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 12.5 MMBtu per hour, constructed in 1990. Under 40 CFR 60, Subpart Dc, this unit is considered an affected source. [40 CFR 60, Subpart Dc] [326 IAC 12]
- (d) Two (2) reactors, identified as reactor No. 1 and No. 2, constructed in 1973 and 1985, respectively, with a maximum capacity of 8,000 and 9,000 gallons, respectively, using the following for VOC control:
 - (1) One (1) natural gas-fired thermal oxidizer, using No. 2 fuel oil-fired as a back-up fuel, with a rated heat capacity of 8 MMBtu per hour, constructed in 1977 and used to control the two (2) reactors.
- (e) One (1) process styrene emission control system consisting of two (2) activated carbon units in series with continuous styrene emission monitoring, controlling items (f), (g), (h), and (i), and constructed in 1998;
- (f) Two (2) thinning tanks, identified as thinning tank No. 1 and No. 2, constructed in 1973 and 1985, respectively, both storing polyester resin, with a maximum capacity of 16,100 and 17,700 gallons, respectively, and both with VOC emissions controlled by the process styrene emission control system described in (e);

- (g) Six (6) blend tanks, identified as blend tank No. 1, No. 2, No. 3, No. 4, No. 5 and No. 6, constructed in 1973, 1973, 1979, 1996, 1999 and 1999, respectively, all storing polyester resin, with a maximum capacity of 6,000, 15,000, 15,000, 800, 6,000 and 6,000 gallons, respectively, controlled by the process styrene emission control system described in (e);
- (h) One (1) styrene flush tank used to hold and capture styrene and used to flush pipes and process vessels between product runs, venting to the process styrene emission control system described in (e);
- (i) One (1) drum off station and vent, constructed in 1985, which transfers finished products to drums and totes for shipment, with a maximum throughput of 6,015 tons per year, and with VOC emissions controlled by the process styrene emission control system described in (e);
- (j) Two storage tanks styrene emission control systems consisting of one (1) activated carbon unit each. The storage tanks listed below each vent through one of the systems: storage tanks No. 2, 3, 6, 7, 8, and 9 vent through the east styrene emission control system; and storage tanks No. 12, 13, 14, 19, 20, and 21 vent through the west styrene emission control system.
 - (1) One (1) tank storing resin, identified as storage tank 2, constructed in 1973, with a maximum capacity of 16,000 gallons;
 - (2) Two (2) tanks storing resin, identified as storage tank 3 and 6, both constructed in 1973, each with a maximum capacity of 30,000 gallons;
 - (3) Two (2) tanks storing resin, identified as storage tanks 8 and 9, both constructed in 1975, each with a maximum capacity of 105,000 gallons;
 - (4) Three (3) tanks storing resin, identified as storage tanks 12, 13, and 14, constructed in 1979, 1981 and 1981, respective, each with a maximum capacity of 50,000 gallons;
 - (5) One (1) tank storing styrene, identified as tank 19, constructed in 1995, with a maximum capacity of 69,000. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (6) Two (2) storage tanks for resin, identified as storage tank 20 and 21, both constructed in 1997, each with a maximum capacity of 30,000 gallons. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (7) One (1) tank storing resin, identified as storage tank 7, constructed in 1981 and modified in 2008, with a maximum capacity of 30,000 gallons Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
- (k) One (1) pneumatic conveying system (IPA unloading), constructed in 1991, with a maximum throughput of 10,000,000 pounds per year, and with particulate emissions controlled by a bag filter (isophthalic unloading system);
- (l) One (1) bulk isophthalic acid handling system, constructed in 1983, with a maximum throughput of 10,000,000 pounds per year;
- (m) Ten (10) unloading stations primarily for polyester resin, with fugitive VOC and HAP

emissions:

- (1) One (1) unloading station, identified as Backpad, constructed in 1990, and relocated/modified in 1999, with a maximum throughput of 2,000,000 pounds of glycol per year;
 - (2) One (1) unloading station, identified as Portable pump, constructed in 1983, with a maximum throughput of 33,000,000 pounds per year;
 - (3) One (1) unloading station, identified as Railsiding, constructed in 1978, with a maximum throughput of 73,000,000 pounds of maleic anhydride/dicyclopentadiene per year;
 - (4) One (1) unloading station, identified as Railsiding, constructed in 1997, with a maximum throughput of 73,000,000 pounds of styrene per year;
 - (5) One (1) unloading station, identified as Railsiding, constructed in 1999, with a maximum throughput of 73,000,000 pounds of polyester resin per year;
 - (6) One (1) unloading station, identified as Ethylene Glycol/Methyl Propanediol, constructed in 1984, with a maximum throughput of 29,200,000 pounds per year;
 - (7) One (1) unloading station, identified as Phthalic Anhydride, constructed in 1987, with a maximum throughput of 14,600,000 pounds per year;
 - (8) One (1) unloading station, identified as Diethylene Glycol/Propylene Glycol, constructed in 1984, with a maximum throughput of 29,200,000 pounds per year;
 - (9) One (1) unloading station, identified as 1,3 Butylene Glycol at P4, constructed in 1989; and
 - (10) One (1) unloading station, identified as Flammable Unloading of Polyester Resin, constructed in 1984, with a maximum throughput of 43,800,000 pounds per year;
- (n) Three (3) loading stations for polyester resin, described as follows, with fugitive VOC and HAP emissions:
- (1) One (1) loading station, identified as Tanker Bays 1 and 2, constructed in 1984, with a maximum throughput of 65,000,000 pounds per year;
 - (2) One (1) loading station, identified as Tanker bays 3 and 4, constructed in 1984, with a maximum throughput of 65,000,000 pounds per year; and
 - (3) One (1) loading station, identified as Tanker Bays 5 and 6, constructed in 2000, with a maximum throughput of 65,000,000 pounds per year.
- (o) One (1) gelcoat spray booth, identified as J290, constructed in 2003, using air assisted airless spray guns for the application of gelcoat at a maximum rate of 74.05 pounds per hour, exhausting to stack No. J290;
- (p) One (1) Resin Transfer Molding (RTM) facility for closed molding, constructed in 2003, using a maximum of 43.83 pounds per hour of polyester resin, and 15.70 pounds per hour of fiberglass, for the production of test molds including flow test, small boats, small trays, and multiple insert tooling, equipped with vent hoods identified as J291.

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) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year;
 - (1) One (1) tank storing phthalic anhydride, identified as storage tank 1, constructed in 1973, with a maximum capacity of 16,000 gallons;
 - (2) One (1) tank storing maleic anhydride, identified as storage tank 16, constructed in 1986, with a maximum capacity of 40,000 gallons . Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (3) One (1) tank storing DCPD, identified as storage tank 4, constructed in 1973, with a maximum capacity of 30,000 gallons and controlled by an activated carbon conservation vent;
 - (4) Five (5) tanks storing glycol, identified as storage tank 5, 10, 11, 17, and 18, constructed in 1974, 1976, 1975, 1976 and 1977, respectively. Tanks 5, 10, 17 and 18 have a maximum capacity of 30,000 gallons each, and Tank 11 has a maximum capacity of 31,400 gallons [326 IAC 8-9];
 - (5) One (1) 6,000 gallon distillate hold tank and one (1) 500 gallon aqueous ammonium storage tank used to hold and neutralize process wastewater prior to incineration;
 - (6) One (1) 3,200 gallon glycol boil tank;
 - (7) Piping fugitives;
 - (8) Inhibitor room;
 - (9) Seven (7) lab vents, one (1) IPA surge vent, and one (1) maintenance building vent;
 - (10) Two (2) fume hoods;
 - (11) Acrylic bead blower exhaust;
 - (12) Waste oil tank vent;
 - (13) SMC Machine (R & D); and
 - (14) Talc charging blower exhaust;
- (b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons:
 - (1) Two (2) gasoline storage tanks, each with a maximum capacity of 250 gallons;
- (c) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;

- (d) Diesel generators not exceeding 1600 horsepower;
 - (1) Diesel generator for boilers;
 - (2) Diesel (backup) generator for the process;
- (e) Natural gas-fired combustion source with heat input equal to or less than ten million (10,000,000) British thermal units per hour;
 - (1) Eight (8) furnaces;
- (f) Noncontact cooling tower systems with either of the following:
 - (1) Forced and induced draft cooling tower system not regulated under a NESHAP
- (g) Stationary fire pumps:
 - (1) Diesel fire pump
- (h) Vacuum pump, air compressor, chiller heater, monorail crane, high sheer mixer, and glass cutter.
- (i) Research and development activities with the primary purpose to test more efficient production processes, test methods for preventing or reducing adverse environmental impacts, or conduct research and development into new processes and products:
 - (1) One (1) Development and Testing Pultrusion Unit with styrene monomer resin, with a maximum capacity of 180 fiberglass parts per hour, using one (1) cyclone vacuum unit with a HEPA filter and carbon adsorption unit for control, exhausting to two (2) stacks (J-280 and J-281) [326 IAC 2-3]

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

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, F127-25003-00003, is issued for a fixed term of ten (10) 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]

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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, 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. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance 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 the certification 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 maintain and implement Preventive Maintenance Plans (PMPs) 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.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by 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, and 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 Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
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 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 the certification 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.

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

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

- (a) All terms and conditions of permits established prior to F127-25003-00003 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 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(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 the certification 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.17 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 the certification 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
Permits Branch, 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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified 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.19 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, 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.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 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.22 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by 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.23 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 within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.25 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 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

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

C.2 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 twenty-five (25) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-3 (Emission Offset);
- (2) The potential to emit any regulated pollutant, except particulate matter (PM) and volatile organic compounds (VOC), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period;
- (3) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (4) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.

(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 that 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.3 Opacity [326 IAC 5-1]

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

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

C.4 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.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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

C.6 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.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by 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.9 Performance Testing [326 IAC 3-6]

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by 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 certification 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.10 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

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

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

The notification which shall be submitted by the Permittee does require the certification by 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.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.13 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.14 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.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; 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 maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.16 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by 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.17 Emission Statement [326 IAC 2-6]

- (a) 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 the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.18 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.19 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. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) 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.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 25 million British thermal units per hour (MMBtu/hour), constructed in 1977;
- (b) One (1) hot oil heater burning natural gas and using #2 fuel oil as a back-up fuel, with a rated heat capacity of 18 MMBtu per hour, constructed in 1973;
- (c) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 12.5 MMBtu per hour, constructed in 1990;
- (d) One (1) natural gas-fired thermal oxidizer, using No. 2 fuel oil-fired as a back-up fuel, with a rated heat capacity of 8 MMBtu per hour, constructed in 1977 and used to control the two (2) reactors.

(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 Fuel Usage Limit [326 IAC 2-8] [326 IAC 2-2]

The usage of No. 2 fuel oil in the 25 MMBtu per hour boiler, the 18 MMBtu per hour hot oil heater, the 12.5 MMBtu per hour boiler, and the 8 MMBtu per hour thermal oxidizer shall be limited to 2500 kilogallons per twelve (12) consecutive month period, with compliance determined at the end of each month, so that source-wide SO₂ emissions are limited to less than 100 tons per year.

Compliance with the above limit, combined with the potential to emit SO₂ from other emission units at the source, shall limit the SO₂ from the entire source to less than 100 tons per twelve (12) consecutive month period and render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 Particulate Emission Limitations [326 IAC 6-2-2] [326 IAC 6-2-4]

- (a) Pursuant to 326 IAC 6-2-2, the particulate from the hot oil heater constructed in 1973 with a rated heat capacity of 18 MMBtu per hour, and the boiler constructed in 1977 with a rated heat capacity of 25 MMBtu per hour shall be limited by the following:

$$Pt = 0.87/Q^{0.16}$$

Where Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
 Q = Total source maximum operating capacity (MMBtu/hr)

Construction Year	Unit	Limit (lb/MMBtu)
1973	18 million British thermal units	0.55
1977	25 million British thermal units	0.48

- (b) Pursuant to 326 IAC 6-2-4, the particulate from the boiler constructed in 1990 with a rated heat capacity of 12.5 MMBtu per hour shall be limited by the following:

$$Pt = 1.09/Q^{0.26}$$

Where Pt = Pounds of particulate matter per million Btu heat input (lb/MMBtu)
Q = Total source maximum operating capacity (MMBtu/hr)

The particulate emissions from the boiler constructed in 1990 with a rated heat capacity of 12.5 MMBtu per hour shall not exceed 0.38 pounds of particulate per MMBtu.

D.1.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the 25 MMBtu per hour boiler, the 18 MMBtu per hour hot oil heater, and the 12.5 MMBtu per hour boiler shall each not exceed five tenths (0.5) pound per MMBtu heat input when using distillate oil (including #2 fuel oil). Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.1.5 Sulfur Dioxide Emissions and Sulfur Content

Compliance with D.1.3 shall be determined using one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from each #2 fuel oil-fired boiler and each hot oil heater, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

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

D.1.6 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1 and D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below.

- (1) Calendar dates covered in the compliance determination period;
- (2) No. 2 fuel oil consumption, sulfur content, and heat content, and equivalent sulfur dioxide emission rates for each #2 fuel oil-fired boiler and hot oil heater per month;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the fuel supplier that certifies the sulfur content of the #2 fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.7 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and the natural gas fired boiler certification, shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (d) Two (2) reactors, identified as reactor No. 1 and No. 2, constructed in 1973 and 1985, respectively, with a maximum capacity of 8,000 and 9,000 gallons, respectively, using the following for VOC control;
 - (1) One (1) natural gas-fired thermal oxidizer, using No. 2 fuel oil-fired as a back-up fuel, with a rated heat capacity of 8 MMBtu per hour, constructed in 1977 and used to control the two (2) reactors.

(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 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-6] [326 IAC 2-3] [326 IAC 2-8]

The raw material input to the two (2) reactors shall be limited to less than 50,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This includes both the vapor phase and the liquid phase of the reactors. The source shall maintain an overall efficiency of 99.75% for the thermal oxidizer. This limit will result in total emissions from the two (2) reactors of less than 3.12 tons of VOC, total HAP emissions of less than 3.12 tons of any individual HAP and less than 3.12 tons of any combination of HAP per twelve (12) consecutive month period.

Compliance with the above limit, combined with the potential to emit VOC and HAP from other emission units at the source, shall limit the VOC from the entire source to less than 25 tons of VOC, and shall limit HAP from the entire source to less than 10 tons of any individual HAP, and less than 25 tons of any combination of HAPs, and render 326 IAC 2-3 (Emission Offset), 326 IAC 2-7 (Part 70 Permits) and 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable.

D.2.2 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.2.3 Volatile Organic Compounds (VOC)

In order to comply with Condition D.2.1, the Permittee shall operate the thermal oxidizer at all times that the reactors are in operation.

D.2.4 Testing Requirements [326 IAC 2-8-5(a)(1)(4)] [326 IAC 2-1.1-11]

In order to comply with Conditions D.2.1, the Permittee shall perform overall VOC control efficiency testing of the thermal oxidizer within five (5) years from the last valid compliance demonstration, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliant demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.2.5 Thermal Oxidizer Temperature Monitoring

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.
- (b) If the continuous monitoring system is not in operation, the temperature will be recorded manually once in a 15-minute period or in any other IDEM approved manner. Nothing in this permit shall excuse the Permittee from complying with the requirement to continuously monitor the temperature of the thermal oxidizer.
- (c) From the date of issuance of this permit until the results of the approved stack tests required by Condition D.2.4 are available, the Permittee shall operate the thermal oxidizer at or above the minimum 3-hour average temperature determined to maintain the required overall efficiency.
- (d) Once the results from the approved stack tests are available, the Permittee shall operate the thermal oxidizer at or above the minimum 3-hour average temperature determined from the most recent compliant stack test following approval of that temperature.

D.2.6 Parametric Monitoring

- (a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with the limit in Condition D.2.1 as approved by IDEM.
- (b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.
- (c) If the duct pressure or fan amperage is outside the respective established range, the Permittee shall take response steps in accordance with Section C - Response to Excursions or Exceedances. A reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

D.2.7 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain monthly records of the total raw material input to the two (2) reactors.
- (b) To document compliance with Conditions D.2.5 and D.2.6, the Permittee shall maintain the following:
 - (1) The continuous temperature records for the thermal oxidizer and the temperature used to demonstrate compliance during the most recent stack test.
 - (2) Daily records of the duct pressure or fan amperage.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (e) One (1) process styrene emission control system consisting of two (2) activated carbon units in series with continuous styrene emission monitoring, controlling items (f), (g), (h), and (i), and constructed in 1998;
- (f) Two (2) thinning tanks, identified as thinning tank No. 1 and No. 2, constructed in 1973 and 1985, respectively, both storing polyester resin, with a maximum capacity of 16,100 and 17,700 gallons, respectively, and both with VOC emissions controlled by the process styrene emission control system described in (e);
- (g) Six (6) blend tanks, identified as blend tank No. 1, No. 2, No. 3, No. 4, No. 5 and No. 6, constructed in 1973, 1973, 1979, 1996, 1999 and 1999, respectively, all storing polyester resin, with a maximum capacity of 6,000, 15,000, 15,000, 800, 6,000 and 6,000 gallons, respectively, controlled by the process styrene emission control system described in (e);
- (h) One (1) styrene flush tank used to hold and capture styrene and used to flush pipes and process vessels between product runs, venting to the process styrene emission control system described in (e);
- (i) One (1) drum off station and vent, constructed in 1985, which transfers finished products to drums and totes for shipment, with a maximum throughput of 6,015 tons per year, and with VOC emissions controlled by the process styrene emission control system described in (e);

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-6] [326 IAC 2-3] [326 IAC 2-8]

- (a) The styrene monomer resin production for the thinning tanks shall be limited to less than 94,365 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit will result in total emissions from the two (2) thinning tanks of less than 0.042 tons of VOC, less than 0.042 tons of any individual HAP and less than 0.042 tons of any combination of HAP per twelve (12) consecutive month period. The Permittee shall use two carbon adsorption units in series to comply with this limit. One unit shall maintain an overall efficiency of 90.25%. The other unit shall maintain an overall control efficiency of 92%.
- (b) The styrene monomer resin production for the blend tanks and flush tank shall be limited to less than 94,365 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit will result in total emissions from all six (6) blend tanks and (1) flush tank of less than 0.042 tons of VOC, less than 10 tons of any individual HAP and less than 0.042 tons of any combination of HAP per twelve (12) consecutive month period. The Permittee shall use two carbon adsorption units in series to comply with this limit. One unit shall maintain an overall control efficiency of 90.25%. The other unit shall maintain an overall control efficiency of 92%.

- (c) The drum off station and vent throughput shall be limited to less than 6,015 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit will result in total emissions from the drum off vent of less than 0.79 tons of VOC, less than 0.79 tons of any individual HAP and less than 0.79 tons of any combination of HAPs per twelve (12) consecutive month period. The Permittee shall maintain a carbon adsorption unit with an overall control efficiency of 90% to comply with this limit.

Compliance with the above limit, combined with the potential to emit VOC and HAP from other emission units at the source, shall limit the VOC from the entire source to less than 25 tons of VOC, and shall limit HAP from the entire source to less than 10 tons of any individual HAP, and less than 25 tons of any combination of HAPs, and render 326 IAC 2-3 (Emission Offset), 326 IAC 2-7 (Part 70 Permits) and 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable.

D.3.2 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.3.3 Volatile Organic Compounds (VOC)

In order to comply with Condition D.3.1, The Permittee shall use the two (2) activated carbon units at all times to control styrene emissions.

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

D.3.4 Compliance Monitoring

In order to comply with D.3.1, emission concentrations from each activated carbon unit shall be measured at least weekly. When styrene concentrations are in excess of 50 parts per million (ppm), a stand-by set of carbon canisters shall be placed into service and the spent carbon canisters shall be removed, regenerated and placed into stand-by service.

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

D.3.5 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1, the Permittee shall maintain monthly records of the styrene monomer resin production for the thinning tanks, flush tank and blend tanks. The Permittee shall also maintain monthly records of the drum off system throughput.
- (b) To document compliance with Conditions D.3.4, the Permittee shall maintain records of the styrene concentration at the carbon canister stack outlet, and a log of the dates of carbon canister replacement and regeneration.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.6 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (j) Two storage tanks styrene emission control systems consisting of one (1) activated carbon unit each. The storage tanks listed below each vent through one of the systems: storage tanks No. 2, 3, 6, 7, 8, and 9 vent through the east styrene emission control system; and storage tanks No. 12, 13, 14, 19, 20, and 21 vent through the west styrene emission control system.
- (1) One (1) tank storing resin, identified as storage tank 2, constructed in 1973, with a maximum capacity of 16,000 gallons;
 - (2) Two (2) tanks storing resin, identified as storage tank 3 and 6, both constructed in 1973, each with a maximum capacity of 30,000 gallons;
 - (3) Two (2) tanks storing resin, identified as storage tanks 8 and 9, both constructed in 1975, each with a maximum capacity of 105,000 gallons;
 - (4) Three (3) tanks storing resin, identified as storage tanks 12, 13, and 14, constructed in 1979, 1981 and 1981, respective, each with a maximum capacity of 50,000 gallons;
 - (5) One (1) tank storing styrene, identified as tank 19, constructed in 1995, with a maximum capacity of 69,000; and
 - (6) Two (2) storage tanks for resin, identified as storage tank 20 and 21, both constructed in 1997, each with a maximum capacity of 30,000 gallons.
 - (7) One (1) tank storing resin, identified as storage tank 7, constructed in 1981 and modified in 2008, with a maximum capacity of 30,000 gallons

(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) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-6] [326 IAC 2-3] [326 IAC 2-8]

The styrene monomer resin production for the storage tanks shall be limited to less than 155,935 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit will result in total emissions from the storage tanks of less than 0.25 tons of VOC, less than 0.19 tons of any individual HAP and less than 0.25 tons of any combination of HAPs per twelve (12) consecutive month period. The Permittee shall maintain an overall efficiency of 90.25% when using the activated carbon canister and tank conservation vent in order to comply with this limit.

Compliance with the above limit, combined with the potential to emit VOC and HAP from other emission units at the source, shall limit the VOC from the entire source to less than 25 tons of VOC, and shall limit HAP from the entire source to less than 10 tons of any individual HAP, and less than 25 tons of any combination of HAPs, and render 326 IAC 2-3 (Emission Offset), 326 IAC 2-7 (Part 70 Permits) and 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable.

D.4.2 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.4.3 Volatile Organic Compounds (VOC)

In order to comply with Condition D.4.1, The Permittee shall use the two (2) activated carbon units at all times to control styrene emissions.

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

D.4.4 Compliance Monitoring

In order to comply with D.4.1, emission concentrations from each activated carbon unit shall be measured at least weekly. When styrene concentrations are in excess of 50 parts per million (ppm), a stand-by set of carbon canisters shall be placed into service and the spent carbon canisters shall be removed, regenerated and placed into stand-by service.

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

D.4.5 Record Keeping Requirements [326 IAC 8-9]

- (a) To document compliance with Condition D.4.1, the Permittee shall maintain monthly records of the styrene monomer resin production for the storage tanks.
- (b) To document compliance with Conditions D.4.4, the Permittee shall maintain records of the styrene concentration at the carbon canister stack outlet, and a log of the dates of carbon canister replacement and regeneration.
- (c) Pursuant to 326 IAC 8-9, the owner or operator of storage tanks 2, 3, 6, 8, 9, 12, 13, and 14 shall maintain a record and submit to IDEM, OAQ a report containing the following information for each vessel:
 - (1) The vessel identification number;
 - (2) The vessel dimensions; and
 - (3) The vessel capacity.The records shall be maintained for the life of the vessel.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.6 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.4.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (k) One (1) pneumatic conveying system (IPA unloading), constructed in 1991, with a maximum throughput of 10,000,000 pounds per year, and with particulate emissions controlled by a bag filter (isophthalic unloading system);
- (l) One (1) bulk isophthalic acid handling system, constructed in 1983, with a maximum throughput of 10,000,000 pounds per year;
- (m) Ten (10) unloading stations primarily for polyester resin, with fugitive VOC and HAP emissions:
 - (1) One (1) unloading station, identified as Backpad, constructed in 1990, and relocated/modified in 1999, with a maximum throughput of 2,000,000 pounds of glycol per year;
 - (2) One (1) unloading station, identified as Portable pump, constructed in 1983, with a maximum throughput of 33,000,000 pounds per year;
 - (3) One (1) unloading station, identified as Railsiding, constructed in 1978, with a maximum throughput of 73,000,000 pounds of maleic anhydride/dicyclopentadiene per year;
 - (4) One (1) unloading station, identified as Railsiding, constructed in 1997, with a maximum throughput of 73,000,000 pounds of styrene per year;
 - (5) One (1) unloading station, identified as Railsiding, constructed in 1999, with a maximum throughput of 73,000,000 pounds of polyester resin per year;
 - (6) One (1) unloading station, identified as Ethylene Glycol/Methyl Propanediol, constructed in 1984, with a maximum throughput of 29,200,000 pounds per year;
 - (7) One (1) unloading station, identified as Phthalic Anhydride, constructed in 1987, with a maximum throughput of 14,600,000 pounds per year;
 - (8) One (1) unloading station, identified as Diethylene Glycol/Propylene Glycol, constructed in 1984, with a maximum throughput of 29,200,000 pounds per year;
 - (9) One (1) unloading station, identified as 1,3 Butylene Glycol at P4, constructed in 1989; and
 - (10) One (1) unloading station, identified as Flammable Unloading of Polyester Resin, constructed in 1984, with a maximum throughput of 43,800,000 pounds per year;
- (n) Three (3) loading stations for polyester resin, described as follows, with fugitive VOC and HAP emissions:
 - (1) One (1) loading station, identified as Tanker Bays 1 and 2, constructed in 1984, with a maximum throughput of 65,000,000 pounds per year;

- (2) One (1) loading station, identified as Tanker bays 3 and 4, constructed in 1984, with a maximum throughput of 65,000,000 pounds per year; and
- (3) One (1) loading station, identified as Tanker Bays 5 and 6, constructed in 2000, with a maximum throughput of 65,000,000 pounds per year.

Insignificant Activities:

- (i) Research and development activities with the primary purpose to test more efficient production processes, test methods for preventing or reducing adverse environmental impacts, or conduct research and development into new processes and products [326 IAC 2-7-1(21)(E)]:
 - (1) One (1) Development and Testing Pultrusion Unit with styrene monomer resin, with a maximum capacity of 180 fiberglass parts per hour, using one (1) cyclone vacuum unit with a HEPA filter and carbon adsorption unit for control, exhausting to two (2) stacks (J-280 and J-281) [326 IAC 2-3]

(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.5.1 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-6] [326 IAC 2-3] [326 IAC 2-8]

The styrene monomer resin usage for the development and testing pultrusion unit shall be limited to less than 1578.90 tons per twelve (12) month period with compliance determined at the end of each month. This limit will result in total emissions of less than 1.53 tons of VOC, less than 10 tons of any individual HAP and less than 25 tons of any combination of HAPs per twelve (12) consecutive month period. The Permittee shall maintain an overall efficiency of 81% when using the carbon adsorption unit.

Compliance with the above limits, combined with the potential to emit VOC and HAP from other emission units at the source, shall limit the VOC from the entire source to less than 25 tons of VOC, and shall limit HAP from the entire source to less than 10 tons of any individual HAP, and less than 25 tons of any combination of HAPs, and render 326 IAC 2-3 (Emission Offset), 326 IAC 2-7 (Part 70 Permits) and 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable.

D.5.2 Particulate Emission Limitations [326 IAC 6-3-2]

The particulate from the pneumatic conveying system, and the bulk isophthalic acid handling system shall be limited as follows:

Process	Process Weight Rate (ton/hr)	Limit (lb/hr)
Pneumatic conveying system (IPA unloading)	0.57	2.80
Bulk isophthalic acid handling system	0.57	2.80

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

When the process weight is less than 100 pounds per hour, the particulate emissions shall not exceed 0.551 pound per hour.

D.5.3 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the development and pultrusion unit and its control device.

Compliance Determination Requirements

D.5.4 Particulate

- (a) In order to comply with Condition D.5.2, The Permittee shall operate the baghouse and control emissions from the pneumatic conveying system at all times that the facilities are in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.5.5 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs)

In order to comply with Condition D.5.1, the carbon adsorption unit for VOC and HAP control shall be in operation and control emissions from the development and testing pultrusion unit at all times that the unit is in operation.

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

D.5.6 Activated Carbon

Emission concentrations for the activated carbon unit associated with the development and testing pultrusion unit shall be measured weekly. When styrene concentrations are in excess of 50 parts per million (ppm) stand-by carbon canisters shall be placed into service and the spent carbon shall be removed, regenerated, and placed in stand-by service.

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

D.5.7 Record Keeping Requirements

- (a) To document compliance with Condition D.5.1, the Permittee shall maintain monthly records of the styrene monomer resin usage.
- (b) To document compliance with Conditions D.5.6, the Permittee shall maintain the following:
 - (1) The weekly styrene concentration at the carbon canister stack outlet; and
 - (2) A log of the dates of carbon replacement and regeneration
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year;
 - (1) One (1) tank storing phthalic anhydride, identified as storage tank 1, constructed in 1973, with a maximum capacity of 16,000 gallons;
 - (2) One (1) tank storing maleic anhydride, identified as storage tank 16, constructed in 1986, with a maximum capacity of 40,000 gallons. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (3) One (1) tank storing DCPD, identified as storage tank 4, constructed in 1973, with a maximum capacity of 30,000 gallons and controlled by an activated carbon conservation vent;
 - (4) Five (5) tanks storing glycol, identified as storage tank 5, 10, 11, 17, and 18, constructed in 1974, 1976, 1975, 1976 and 1977, respectively. Tanks 5, 10, 17 and 18 have a maximum capacity of 30,000 gallons each, and Tank 11 has a maximum capacity of 31,400 gallons [326 IAC 8-9];
 - (5) One (1) 6,000 gallon distillate hold tank and one (1) 500 gallon aqueous ammonium storage tank used to hold and neutralize process wastewater prior to incineration;

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

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

D.6.1 Record Keeping Requirements [326 IAC 8-9]

- (a) The owner or operator of storage tanks 1, 4, 5, 10, 11, 17 and 18, the distillate hold tank and the ammonium storage tank shall maintain a record and submit to IDEM, OAQ a report containing the following information for each vessel:
 - (1) The vessel identification number;
 - (2) The vessel dimensions; and
 - (3) The vessel capacity.

The records shall be maintained for the life of the vessel. The requirement in (a) to submit a report to IDEM, OAQ, has already been satisfied. The report was submitted June 21, 1996.

- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (o) One (1) gelcoat spray booth, identified as J290, constructed in 2003, using air assisted airless spray guns for the application of gelcoat at a maximum rate of 74.05 pounds per hour, exhausting to stack No. J290

(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.7.1 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-6] [326 IAC 2-3] [326 IAC 2-8]

The gelcoat usage at spray booth J290 shall be limited to less than 3.09 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This will result in total emissions of less than 0.59 tons of VOC, less than 0.40 tons of any individual HAP, and less than 0.59 tons of any combination of HAPs per twelve (12) consecutive month period.

Compliance with the above limit, combined with the potential to emit VOC and HAP from other emission units at the source, shall limit the VOC from the entire source to less than 25 tons of VOC, and shall limit HAP from the entire source to less than 10 tons of any individual HAP, and less than 25 tons of any combination of HAPs, and render 326 IAC 2-3 (Emission Offset), 326 IAC 2-7 (Part 70 Permits) and 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable.

D.7.2 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(d), surface coating processes shall be controlled by a dry particulate filter, waterwash, or an equivalent control device and the Permittee shall operate the control devices in accordance with the manufacturer's specifications. For the gelcoat spray booth J290, the air-assisted airless spray application method has been determined to satisfy this requirement for a control device.

D.7.3 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

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

D.7.4 Record Keeping Requirements

- (a) To document compliance with Condition D.7.1, the Permittee shall maintain monthly records of the gelcoat usage in spray booth J290.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.7.5 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 12.5 MMBtu per hour, constructed in 1990. Under 40 CFR 60, Subpart Dc, this unit is considered an affected source. [40 CFR 60, Subpart Dc] [326 IAC 12]

(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 NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the boiler as described in this section except when otherwise specified in 40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial - Commercial - Institutional Steam Generating Units).

E.1.2 Small Industrial - Commercial - Institutional Steam Generating Unit NSPS [40 CFR Part 60, Subpart Dc]

The Permittee, which uses a small industrial steam generating unit, shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (included as Attachment A of this permit):

- (1) 40 CFR 60.40c(a), (b), (c), (d)
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.42c(d)
- (4) 40 CFR 60.42c(g), (h), (i)
- (5) 40 CFR 60.44c(a), (b), (c), (e), (g), (h), (j)
- (6) 40 CFR 60.46c(d)
- (7) 40 CFR 60.48c(a), (b), (d), (e), (f), (g), (i), (j)

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) tank storing resin, identified as storage tank 7, constructed in 1981 and modified in 2008, with a maximum capacity of 30,000 gallons. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12];
- (b) One (1) tank storing maleic anhydride, identified as storage tank 16, constructed in 1986, with a maximum capacity of 40,000 gallons. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12];
- (c) One (1) tank storing styrene, identified as tank 19, constructed in 1995, with a maximum capacity of 69,000. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]; and
- (d) Two (2) storage tanks for resin, identified as storage tank 20 and 21, both constructed in 1997, each with a maximum capacity of 30,000 gallons. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]

(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 NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the boiler as described in this section except when otherwise specified in 40 CFR 60, Kb (Standards of Performance For Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984).

E.2.2 Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Comenced After July 23, 1984 NSPS [40 CFR Part 60, Subpart Kb]

The Permittee, which uses volatile organic liquid storage vessels, shall comply with the following provisions of 40 CFR Part 60, Subpart Kb (included as Attachment B of this permit):

- (1) 40 CFR 60.110b
- (2) 40 CFR 60.111b
- (3) 40 CFR 60.116(a)
- (4) 40 CFR 60.116(b)
- (5) 40 CFR 60.116(d)

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

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

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F127-25003-00003

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 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: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F127-25003-00003

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: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
SEMI- ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F127-25003-00003

<input type="checkbox"/> Natural Gas Only <input type="checkbox"/> Alternate Fuel burned From: _____ To: _____
--

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature: _____
Printed Name: _____
Title/Position: _____
Date: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F127-25003-00003
Facility: Three (3) Boilers (constructed in 1973, 1977 and 1990) and One (1) Thermal Oxidizer
Parameter: No. 2 Fuel Oil Usage
Limit: Less than a total of 2500 kilogallons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F127-25003-00003
Facility: Two (2) reactors (No. 1 and No. 2)
Parameter: Raw material input
Limit: Less than 50,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F127-25003-00003
Facility: Two (2) thinning tanks (No. 1 and No. 2)
Parameter: Styrene monomer resin production
Limit: Less than 94,365 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
 Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
 Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
 FESOP Permit No.: F127-25003-00003
 Facility: Six (6) blend tanks and one (1) flush tank (No. 1, No. 2, No. 3, No. 4, No. 5, No. 6)
 Parameter: Styrene monomer resin production
 Limit: Less than 94,365 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F127-25003-00003
Facility: Drum off station and vent
Parameter: Drum off vent throughput
Limit: Less than 6,015 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F187-25003-00003
Facility: Storage tanks (No. 2, No. 3, No. 6, No. 7, No. 8, No. 9, No. 12, No. 13, No. 14, No. 19, No. 20 and No. 21)
Parameter: Styrene monomer resin production
Limit: Less than 155,935 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F187-25003-00003
Facility: Development and testing pultrusion unit
Parameter: Styrene monomer resin usage
Limit: Less than 1578.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: AOC, LLC
Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
FESOP Permit No.: F187-25003-00003
Facility: Gelcoat spray booth J290
Parameter: Gelcoat usage
Limit: Less than 3.09 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: AOC, LLC
 Source Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
 Mailing Address: 2552 Industrial Drive, Valparaiso, Indiana 46383
 FESOP Permit No.: F127-25003-00003

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

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<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: _____

Attach a signed certification to complete this report.

Attachment A:

New Source Performance Standard

40 CFR 60

Subpart Dc

**Standards of Performance for Small Industrial -
Commercial - Institutional Steam Generating Units**

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

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (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 GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO₂control 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 SO₂control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical 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 any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an 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.

§ 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 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= SO₂emission 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_cK_aH_b= Heat input from the combustion of oil, in J (MMBtu).

(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) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or 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 affected 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:

$$E_{ho0} = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

E_{ho0} = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho} = Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$.

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

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

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

Where:

$\%P_s$ = Potential SO_2 emission rate, in percent;

$\%R_g$ = SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

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

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_{g0}$) is computed from E_{ao0} from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate (E_{ai0}) using the following formula:

$$\%R_{g0} = 100 \left(1 - \frac{E_{wo}}{E_{ai0}} \right)$$

Where:

$\%R_{g0}$ = Adjusted $\%R_g$, in percent;

E_{ao0} = Adjusted E_{ao} , ng/J (lb/MMBtu); and

E_{ai0} = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai0} , an adjusted hourly SO_2 inlet rate (E_{hi0}) is used. The E_{hi0} is computed using the following formula:

$$E_{hi0} = \frac{E_m - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi0} = Adjusted E_{hi} , ng/J (lb/MMBtu);

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$; and

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating % P_s and E_{h0} 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_{h0} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3 of appendix A of this part shall be used for gas analysis when applying Method 5, 5B, or 17 of appendix A of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (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 of this part (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with EPA Reference Method 5, 5B, or 17 of appendix A of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 of appendix A of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(13) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

- (3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.
- (4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.
- (5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.
- (6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.
- (7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (d)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.
- (i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
- (ii) [Reserved]
- (8) The 1-hour arithmetic averages required under paragraph (d)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.
- (9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (d)(7) of this section are not met.
- (10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.
- (11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O₂(or CO₂) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraph (d)(7)(i) of this section.
- (i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.
- (ii) For O₂(or CO₂), EPA reference Method 3, 3A, or 3B of appendix A of this part, as applicable shall be used.
- (12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.
- (13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.
- (d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the 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), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All COMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.06 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO₂ or PM emissions are not required to operate a CEMS for measuring opacity if they follow the applicable procedures under §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the output of the system, for PM emissions discharged to the atmosphere as specified in §60.45c(d). The CEMS specified in paragraph §60.45c(d) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) An affected facility that does not use post-combustion technology (except a wet scrubber) for reducing PM, 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 to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS for measuring opacity. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section.

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. At least two data points per hour must be used to calculate each 1-hour average.

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An affected facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the appropriate delegated permitting authority is not required to operate a COMS for measuring opacity. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling 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.

(d) The owner or operator of each affected facility subject to the SO₂emission 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 SO₂emission 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 SO₂emission 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 SO₂emission 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 SO₂or diluent (O₂or 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 is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the 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.

Attachment B:

New Source Performance Standard

40 CFR 60

Subpart Kb

**Standards of Performance for Volatile Organic Liquid
Storage Vessels (Including Petroleum Liquid Storage
Vessels) for Which Construction, Reconstruction, or
Modification Commenced After July 23, 1984**

Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Source: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

- (1) Vessels at coke oven by-product plants.
- (2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.
- (3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.
- (4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.
- (5) Vessels located at bulk gasoline plants.
- (6) Storage vessels located at gasoline service stations.
- (7) Vessels used to store beverage alcohol.
- (8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance*—(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of §60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see §60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see §60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

- (1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;
- (2) Subsurface caverns or porous rock reservoirs; or
- (3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.116b *Monitoring of operations.*

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(ii) ASTM D323–82 or 94 (incorporated by reference—see §60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of §60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

§ 60.117b *Delegation of authority.*

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

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

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

Source Background and Description

Source Name:	AOC, LLC
Source Location:	2552 Industrial Dr. Valparaiso, Indiana 46383
County:	Porter
SIC Code:	2821
Permit Renewal No.:	F127-25003-00003
Permit Reviewer:	Anne-Marie C. Hart

On January 5, 2009, the Office of Air Quality (OAQ) had a notice published in Chesterton Tribune, Chesterton, Indiana, stating that AOC, LLC had applied for a FESOP renewal. The notice also stated that the OAQ proposed to issue a FESOP renewal 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 January 27, 2009, Jeffrey Miller, on behalf of AOC, LLC, submitted comments to IDEM, OAQ 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:

The 18 MMBtu hot oil heater is incorrectly referred to as a boiler several times in the permit. Please amend each boiler reference so that it lists our 18 MMBtu hot oil heater as such.

Response to Comment 1:

IDEM agrees with the recommended changes.

All descriptions have been changed throughout the permit as follows:

One (1) ~~natural gas-fired boiler,~~ **hot oil heater burning natural gas and** using #2 fuel oil as a back-up fuel, with a rated heat capacity of 18 MMBtu per hour, constructed in 1973;

Condition D.1.1 (Fuel Usage Limit) has been changed as follows:

D.1.1 Fuel Usage Limit [326 IAC 2-8] [326 IAC 2-2]

The usage of No. 2 fuel oil in the 25 MMBtu per hour boiler, the 18 MMBtu per hour ~~boiler~~ **hot oil heater**, the 12.5 MMBtu per hour boiler, and the 8 MMBtu per hour thermal oxidizer shall be limited to 2500 kilogallons per twelve (12) consecutive month period, with compliance determined

at the end of each month, so that source-wide SO₂ emissions are limited to less than 100 tons per year.

. . .

Condition D.1.2 (Particulate Emission Limitations) has been changed as follows:

D.1.2 Particulate Emission Limitations [326 IAC 6-2-2] [326 IAC 6-2-4]

- (a) Pursuant to 326 IAC 6-2-2, the particulate from the ~~boiler~~ **hot oil heater** constructed in 1973 with a rated heat capacity of 18 MMBtu per hour, and the boiler constructed in 1977 with a rated heat capacity of 25 MMBtu per hour shall be limited by the following:

. . .

Comment 2:

The diesel generators are listed under A.3(c), which discusses petroleum storage. We would appreciate it if these diesel generators could be listed under A.3(d).

Response to Comment 2:

IDEM agrees with the recommended changes.

Section A.3 (Insignificant Activities) has been changed as follows:

. . .

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

(1) ~~Diesel generator for boilers;~~

(2) ~~Diesel (backup) generator for the process;~~

- (d) Diesel generators not exceeding 1600 horsepower;

(1) **Diesel generator for boilers;**

(2) **Diesel (backup) generator for the process;**

. . .

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

Change 1:

Conditions D.1.3 (Sulfur Dioxide), D1.5 (Sulfur Dioxide Emissions and Sulfur Content), and D.1.6 (Record Keeping Requirements) have been changed to reflect the change in the description of the 18 MMBtu hot oil heater as follows:

D.1.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the 25 MMBtu per hour boiler, the 18 MMBtu per hour ~~boiler~~ **hot oil heater**, and the 12.5 MMBtu per hour boiler shall each not exceed five tenths (0.5) pound per MMBtu heat input when using distillate oil (including #2 fuel oil). Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

. . .

D.1.5 Sulfur Dioxide Emissions and Sulfur Content

Compliance with D.1.3 shall be determined using one of the following options.

. . .

- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from each #2 fuel oil-fired boiler **and each hot oil heater**, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

. . .

D.1.6 Record Keeping Requirements

. . .

- (2) No. 2 fuel oil consumption, sulfur content, and heat content, and equivalent sulfur dioxide emission rates for each #2 fuel oil-fired boiler **and hot oil heater** per month;

. . .

IDEM Contact

- (a) Questions regarding this proposed FESOP Renewal can be directed to Anne-Marie C. Hart at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension (4-5174).
- (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

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit
Renewal

Source Background and Description

Source Name:	AOC, LLC
Source Location:	2552 Industrial Dr. Valparaiso, Indiana 46383
County:	Porter
SIC Code:	2821
Permit Renewal No.:	F127-25003-00003
Permit Reviewer:	Anne-Marie C. Hart

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from AOC, LLC relating to the operation of a stationary polyester and acrylic resin source.

History

On July 6, 2008, AOC, LLC submitted an application to the OAQ requesting to renew its operating permit. AOC, LLC was issued a FESOP Renewal (F127-13997-00003) on April 8, 2003.

Permitted Emission Units and Pollution Control Equipment

- (a) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 25 million British thermal units per hour (MMBtu/hour), constructed in 1977;
- (b) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 18 MMBtu per hour, constructed in 1973;
- (c) One (1) natural gas-fired boiler, using #2 fuel oil as a back-up fuel, with a rated heat capacity of 12.5 MMBtu per hour, constructed in 1990. Under 40 CFR 60, Subpart Dc, this unit is considered an affected source. [40 CFR 60, Subpart Dc] [326 IAC 12]
- (d) Two (2) reactors, identified as reactor No. 1 and No. 2, constructed in 1973 and 1985, respectively, with a maximum capacity of 8,000 and 9,000 gallons, respectively, using the following for VOC control;
 - (1) One (1) natural gas-fired thermal oxidizer, using No. 2 fuel oil-fired as a back-up fuel, with a rated heat capacity of 8 MMBtu per hour, constructed in 1977 and used to control the two (2) reactors.
- (f) One (1) process styrene emission control system consisting of two (2) activated carbon units in series with continuous styrene emission monitoring, controlling items (f), (g), (h), and (i), and constructed in 1998;
- (g) Two (2) thinning tanks, identified as thinning tank No. 1 and No. 2, constructed in 1973 and 1985, respectively, both storing polyester resin, with a maximum capacity of 16,100 and 17,700 gallons, respectively, and both with VOC emissions controlled by the process styrene emission control system described in (e);
- (h) Six (6) blend tanks, identified as blend tank No. 1, No. 2, No. 3, No. 4, No. 5 and No. 6, constructed in 1973, 1973, 1979, 1996, 1999 and 1999, respectively, all storing polyester

- resin, with a maximum capacity of 6,000, 15,000, 15,000, 800, 6,000 and 6,000 gallons, respectively, controlled by the process styrene emission control system described in (e);
- (i) One (1) styrene flush tank used to hold and capture styrene and used to flush pipes and process vessels between product runs, venting to the process styrene emission control system described in (e);
 - (j) One (1) drum off station and vent, constructed in 1985, which transfers finished products to drums and totes for shipment, with a maximum throughput of 6,015 tons per year, and with VOC emissions controlled by the process styrene emission control system described in (e);
 - (k) Two storage tanks styrene emission control systems consisting of one (1) activated carbon unit each. The storage tanks listed below each vent through one of the systems: storage tanks No. 2, 3, 6, 7, 8, and 9 vent through the east styrene emission control system; and storage tanks No. 12, 13, 14, 19, 20, and 21 vent through the west styrene emission control system.
 - (1) One (1) tank storing resin, identified as storage tank 2, constructed in 1973, with a maximum capacity of 16,000 gallons;
 - (2) Two (2) tanks storing resin, identified as storage tank 3 and 6, both constructed in 1973, each with a maximum capacity of 30,000 gallons;
 - (3) Two (2) tanks storing resin, identified as storage tanks 8 and 9, both constructed in 1975, each with a maximum capacity of 105,000 gallons;
 - (4) Three (3) tanks storing resin, identified as storage tanks 12, 13, and 14, constructed in 1979, 1981 and 1981, respective, each with a maximum capacity of 50,000 gallons;
 - (5) One (1) tank storing styrene, identified as tank 19, constructed in 1995, with a maximum capacity of 69,000. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (6) Two (2) storage tanks for resin, identified as storage tank 20 and 21, both constructed in 1997, each with a maximum capacity of 30,000 gallons. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (7) One (1) tank storing resin, identified as storage tank 7, constructed in 1981 and modified in 2008, with a maximum capacity of 30,000 gallons Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (l) One (1) pneumatic conveying system (IPA unloading), constructed in 1991, with a maximum throughput of 10,000,000 pounds per year, and with particulate emissions controlled by a bag filter (isophthalic unloading system);
 - (m) One (1) bulk isophthalic acid handling system, constructed in 1983, with a maximum throughput of 10,000,000 pounds per year;
 - (n) Ten (10) unloading stations primarily for polyester resin, with fugitive VOC and HAP emissions:

- (1) One (1) unloading station, identified as Backpad, constructed in 1990, and relocated/modified in 1999, with a maximum throughput of 2,000,000 pounds of glycol per year;
 - (2) One (1) unloading station, identified as Portable pump, constructed in 1983, with a maximum throughput of 33,000,000 pounds per year;
 - (3) One (1) unloading station, identified as Railsiding, constructed in 1978, with a maximum throughput of 73,000,000 pounds of maleic anhydride/dicyclopentadiene per year;
 - (4) One (1) unloading station, identified as Railsiding, constructed in 1997, with a maximum throughput of 73,000,000 pounds of styrene per year;
 - (5) One (1) unloading station, identified as Railsiding, constructed in 1999, with a maximum throughput of 73,000,000 pounds of polyester resin per year;
 - (6) One (1) unloading station, identified as Ethylene Glycol/Methyl Propanediol, constructed in 1984, with a maximum throughput of 29,200,000 pounds per year;
 - (7) One (1) unloading station, identified as Phthalic Anhydride, constructed in 1987, with a maximum throughput of 14,600,000 pounds per year;
 - (8) One (1) unloading station, identified as Diethylene Glycol/Propylene Glycol, constructed in 1984, with a maximum throughput of 29,200,000 pounds per year;
 - (9) One (1) unloading station, identified as 1,3 Butylene Glycol at P4, constructed in 1989; and
 - (10) One (1) unloading station, identified as Flammable Unloading of Polyester Resin, constructed in 1984, with a maximum throughput of 43,800,000 pounds per year;
- (o) Three (3) loading stations for polyester resin, described as follows, with fugitive VOC and HAP emissions:
- (1) One (1) loading station, identified as Tanker Bays 1 and 2, constructed in 1984, with a maximum throughput of 65,000,000 pounds per year;
 - (2) One (1) loading station, identified as Tanker bays 3 and 4, constructed in 1984, with a maximum throughput of 65,000,000 pounds per year; and
 - (3) One (1) loading station, identified as Tanker Bays 5 and 6, constructed in 2000, with a maximum throughput of 65,000,000 pounds per year.
- (p) One (1) gelcoat spray booth, identified as J290, constructed in 2003, using air assisted airless spray guns for the application of gelcoat at a maximum rate of 74.05 pounds per hour, exhausting to stack No. J290;
- (q) One (1) Resin Transfer Molding (RTM) facility for closed molding, constructed in 2003, using a maximum of 43.83 pounds per hour of polyester resin, and 15.70 pounds per hour of fiberglass, for the production of test molds including flow test, small boats, small trays, and multiple insert tooling, equipped with vent hoods identified as J291.

Insignificant Activities

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

- (a) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, and lead emissions less than two-tenths (0.2) tons per year;
 - (1) One (1) tank storing phthalic anhydride, identified as storage tank 1, constructed in 1973, with a maximum capacity of 16,000 gallons;
 - (2) One (1) tank storing maleic anhydride, identified as storage tank 16, constructed in 1986, with a maximum capacity of 40,000 gallons. Under 40 CFR 60, Subpart Kb, this unit is considered an affected source. [40 CFR 60, Subpart Kb] [326 IAC 12]
 - (3) One (1) tank storing DCPD, identified as storage tank 4, constructed in 1973, with a maximum capacity of 30,000 gallons and controlled by an activated carbon conservation vent;
 - (4) Five (5) tanks storing glycol, identified as storage tank 5, 10, 11, 17, and 18, constructed in 1974, 1976, 1975, 1976 and 1977, respectively. Tanks 5, 10, 17 and 18 have a maximum capacity of 30,000 gallons each, and Tank 11 has a maximum capacity of 31,400 gallons [326 IAC 8-9];
 - (5) One (1) 6,000 gallon distillate hold tank and one (1) 500 gallon aqueous ammonium storage tank used to hold and neutralize process wastewater prior to incineration;
 - (6) One (1) 3,200 gallon glycol boil tank;
 - (7) Piping fugitives;
 - (8) Inhibitor room;
 - (9) Seven (7) lab vents, one (1) IPA surge vent, and one (1) maintenance building vent;
 - (10) Two (2) fume hoods;
 - (11) Acrylic bead blower exhaust;
 - (12) Waste oil tank vent;
 - (13) SMC Machine (R & D); and
 - (14) Talc charging blower exhaust;
- (b) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons:
 - (1) Two (2) gasoline storage tanks, each with a maximum capacity of 250 gallons;
- (c) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month:

- (1) Diesel generator for boilers;
- (2) Diesel (backup) generator for the process;
- (d) Diesel generators not exceeding 1600 horsepower;
- (e) Natural gas-fired combustion source with heat input equal to or less than ten million (10,000,000) British thermal units per hour;
 - (1) Eight (8) furnaces;
- (f) Noncontact cooling tower systems with either of the following:
 - (1) Forced and induced draft cooling tower system not regulated under a NESHAP
- (g) Stationary fire pumps:
 - (1) Diesel fire pump
- (h) Vacuum pump, air compressor, chiller heater, monorail crane, high sheer mixer, and glass cutter.
- (i) Research and development activities with the primary purpose to test more efficient production processes, test methods for preventing or reducing adverse environmental impacts, or conduct research and development into new processes and products [326 IAC 2-7-1(21)(E)]:
 - (1) One (1) Development and Testing Pultrusion Unit with styrene monomer resin, with a maximum capacity of 180 fiberglass parts per hour, using one (1) cyclone vacuum unit with a HEPA filter and carbon adsorption unit for control, exhausting to two (2) stacks (J-280 and J-281) [326 IAC 2-3]

Existing Approvals

Since the issuance of the FESOP Renewal F127-13397-00003 on April 8, 2003, the source has constructed or has been operating under the following approvals as well:

- (a) Minor Permit Revision No. 127-18019-00003 issued on October 24, 2003; and
- (b) Administrative Amendment No. 127-18992-00003 issued on January 20, 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.

The following terms and conditions from previous approvals have been revised in this FESOP Renewal:

- (a) Fuel Usage Limitation

The No. 2 fuel oil usage limit in FESOP F127-13997-00003 (issued April 8, 2003) for the boilers and the thermal oxidizer limited the source-wide SO₂ emission to 99 tons per twelve (12) consecutive month period. The source has requested revising the fuel usage limit from 2788 kilogallons per twelve (12) consecutive month period to 2500 kilogallons per twelve (12) consecutive month period. The revised fuel usage limit would limit

source-wide SO₂ emissions to less than 90 tons per twelve (12) consecutive month period [See Appendix A of the TSD for calculations].

- (b) **FESOP Limit**
 The FESOP limit in FESOP F127-13997-00003 (issued April 8, 2003) VOC emissions from the two (2) reactors has been revised to reflect current operations. The source has requested that the condition account for the liquid phase emissions from the reactor. These emissions are also fed into the thermal oxidizer. The VOC limits will not change as a result of this request.
- (c) **Thermal Oxidizer Temperature**
 The source has requested that the temperature of the thermal oxidizer be revised to reflect the most recent compliant stack test. On October 29, 2004, the compliant stack test witnessed by IDEM, demonstrated that compliance is achieved at a minimum temperature of 1318.66 ° F.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

- (a) See Appendix A of this document for detailed emission calculations.
- (b) The insignificant activities calculations have been verified from FESOP No. F127-13997-00003. The calculations for the individual insignificant activities, except the pultrusion unit, have not been included in Appendix A of this document.

County Attainment Status

The source is located in Porter County

Pollutant	Designation
SO ₂	Cannot be classified for the area bounded on the north by Lake Michigan; on the west by the Lake County and Porter County line; on the south by I-80 and I-90; and on the east by the LaPorte County and Porter County line. The remainder of Porter County is better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Nonattainment Subpart 2 Moderate effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area, including Porter County, for the 1-hour standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.	

- (a) **Ozone Standards**
 - (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
 - (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.

- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) 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.

- (i) 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.

- (ii) 8-hour ozone standard

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

- (b) PM2.5

U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Porter County as nonattainment for PM2.5. 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 PM2.5 promulgated on May 8th, 2008, and effective on July 15th

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**
Porter County has been classified as attainment or unclassifiable in Indiana for SO₂, CO, PM₁₀, NO_x and Lead . Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Since this source is classified as a glass fiber processing plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) **Fugitive Emissions**
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Unrestricted Potential Emissions

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The unrestricted potential to emit (as defined in 326 IAC 2-7-1(29)) of SO₂ is greater than 100 tons per year, and the unrestricted potential to emit VOC is greater than 25 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their SO₂ and VOC emissions to less than Title V levels, therefore the source will be issued a FESOP.
- (b) The unrestricted potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The unrestricted potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the unrestricted potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the source has agreed to limit their single HAP emissions and total HAP emissions below Title V limits. Therefore, the source will be issued a FESOP

Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are counted toward the determination of Part 70 applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2002 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	Not Reported
PM ₁₀	3
PM _{2.5}	Not Reported
SO ₂	0
VOC	12
CO	6
NO _x	9
Lead	0

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered 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 (tons/year)							
	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	CO	NO _x	HAPs
Natural Gas Combustion	0.53	2.11	2.11	0.17	1.53	23.36	27.81	0.52
No. 2 Fuel Oil Combustion	<2.50	<4.13	<4.13	<88.75	<0.43	<6.25	<25.0	<0.01
Reactors	0.00	0.00	0.00	0.00	<3.12	0.00	0.00	<3.12
Blend Tanks	0.00	0.00	0.00	0.00	<0.042	0.00	0.00	<0.042
Storage Tanks	0.00	0.00	0.00	0.00	<0.25	0.00	0.00	<0.25
Thinning Tanks	0.00	0.00	0.00	0.00	<0.042	0.00	0.00	<0.042
Drum Off Vent	0.00	0.00	0.00	0.00	<0.79	0.00	0.00	<0.79
Gel Coat Spray Booth	<0.37	<0.37	<0.37	0.00	<0.59	0.00	0.00	<0.59
Resin Transfer Molding	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.72
Pultrusion Unit	0.00	0.00	0.00	0.00	<1.53	0.00	0.00	<1.53
Conveying, Loading, Unloading, Handling	0.00	0.00	0.00	0.00	15.29	0.00	0.00	13.20
Insignificant Activities	7.04	5.51	5.51	0.40	0.36	0.75	3.90	0.00
Total Emissions	<100	<100	<100	<100	<25	<100	<100	< 10 for single HAP <25 for any combination of HAPs

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than, or limited to less than, one hundred (<100) tons per year, and it is one of the twenty-eight (28) listed source categories.
- (b) This existing stationary source is not major for Emission Offset because the emissions of the nonattainment pollutant, VOC, are less than twenty-five (<25) tons per year.
- (c) This existing stationary source is not major for Emission Offset because the emissions of the nonattainment pollutant, PM2.5, are less than 100 tons per year.
- (d) Fugitive Emissions
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

Federal Rule Applicability

- (a) The requirements of the New Source Performance Standard for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, are not included in the permit for the natural gas/#2 fuel oil-fired boilers with rated heat capacities of 25 MMBtu per hour and 18 MMBtu per hour. Construction of these units commenced prior to June 9, 1989.
- (b) The natural gas/#2 fuel oil-fired boiler with a rated heat capacity of 12.5 MMBtu per hour is subject to the New Source Performance Standard for Small Industrial - Commercial - Institutional Steam Generating Units (40 CFR 60, Subpart Dc), which is incorporated by reference as 326 IAC 12. The boiler, constructed in 1990, has a rated heat capacity greater than 10 MMBtu per hour and less than 100 MMBtu per hour.

The emission unit is subject to the following portions of Subpart Dc:

- (1) 40 CFR 60.40c(a), (b), (c), (d)
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.42c(d)
- (4) 40 CFR 60.42c(g), (h), (i)
- (5) 40 CFR 60.44c(a), (b), (c), (e), (g), (h), (j)
- (6) 40 CFR 60.46c(d)
- (7) 40 CFR 60.48c(a), (b), (d), (e), (f), (g), (i), (j)

- (c) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984, 40 CFR 60, Subpart Kb, are not included for the following tanks:

Tank	Reason Subpart Kb is Not Applicable
Storage Tanks 1, 3, 4 and 6	Constructed in 1973, before the applicability date of the rule
Storage Tank 12	Constructed in 1979, before the applicability date of the rule
Storage Tanks 13 and 14	Constructed in 1981, before the applicability date of the rule
Storage Tanks 8, 9 and 11	Constructed in 1975, before the applicability date of the rule
Storage Tank 2	Constructed in 1973, before the applicability date of the rule
Storage Tank 5	Constructed in 1974, before the applicability date of the rule
Storage Tanks 10 and 17	Constructed in 1976, before the applicability date of the rule
Storage Tank 18	Constructed in 1977, before the applicability date of the rule
Distillate hold tank and ammonium storage tank	Capacity less than 75 cubic meters

- (d) The requirements of the New Source Performance Standard for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry, 40 CFR 60, Subpart DDD, are not included in the permit. The source is a manufacturer of polyester and acrylic resin.
- (e) The storage tanks identified as 7, 16, 19, 20 and 21 are subject to the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60, Subpart Kb), which is incorporated by reference as 326 IAC 12. The tanks were constructed, with tank 7 modified to store a new material, after July 23, 1984 and store volatile organic liquids.
 - (1) 40 CFR 60.110b
 - (2) 40 CFR 60.111b
 - (3) 40 CFR 60.116(a)
 - (4) 40 CFR 60.116(b)
 - (5) 40 CFR 60.116(d)
- (f) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Group IV Polymers and Resins, Subpart JJJ are not included in the permit. This source is not a major source since it has accepted HAP emission limits.
- (h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastic Composites Production, Subpart WWWW, are not included in the permit. The source is not a major source since it has accepted HAP emission limits.
- (i) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is one of the twenty-eight listed source categories pursuant to 326 IAC 2-2-1(gg)(1) and the unrestricted potential to emit SO₂ from the entire source is greater than 100 tons per year. Pursuant to 326 IAC 2-8 (FESOP) and 326 IAC 2-3 (Emission Offset), the source will limit the SO₂ emissions from the combustion of No. 2 fuel oil by limiting their No. 2 fuel usage to less than 2500 kilogallons per twelve (12) consecutive month period. Compliance with this limit, combined with the potential to emit SO₂ from other emission units at the source, shall limit the SO₂ from the entire source to less than 100 tons per twelve (12) consecutive month period and render 326 IAC 2-2 and 326 IAC 2-7 not applicable.

326 IAC 2-3 (Emission Offset)

This source is located in Porter County. The unrestricted potential to emit VOC from the entire source is greater than twenty-five (25) tons per year. Pursuant to 326 IAC 2-3 (Emission Offset), the Permittee shall comply with the following:

- (a) The raw material input to the two (2) reactors shall be limited to less than 50,000 tons per twelve (12) consecutive month period. This limit will result in total VOC and HAPs emissions from the two (2) reactors of less than 3.12 tons per twelve (12) consecutive month period. The source shall use the thermal oxidizer with an efficiency of 99.75% in order to comply with this limit.

- (b) The styrene monomer resin production for the thinning tanks shall be limited to less than 94,365 tons per twelve (12) consecutive month period. This limit will result in total VOC and HAPs emissions from the two (2) thinning tanks of less than 0.042 tons per consecutive twelve (12) month period. The source will use two carbon adsorption units in series, with overall efficiencies of 90.25% and 92%, respectively, in order to comply with this limit.
- (c) The styrene monomer resin production for the blend tanks and flush tanks shall be limited to less than 94,365 tons per twelve (12) consecutive month period. This limit will result in total VOC and HAPs emissions from all six (6) blend tanks and one (1) flush tank of less than 0.042 tons per twelve (12) consecutive month period. The source will use two carbon adsorption units in series, with overall efficiencies of 90.25% and 92%, respectively, in order to comply with this limit.
- (d) The drum off vent throughput shall be limited to less than 6,015 tons per twelve (12) consecutive month period. This limit will result in total VOC and HAPs emissions from the drum off vent of less than 0.79 tons per twelve (12) consecutive month period. The source will use two carbon adsorption units in series, with overall efficiencies of 90.25% and 92%, respectively, in order to comply with this limit.
- (e) The styrene monomer resin production for the storage tanks shall be limited to less than 155,935 tons per twelve (12) consecutive month period. This limit will result in total VOC and HAPs emissions from the storage tanks of less than 0.25 tons per twelve (12) consecutive month period. The source will use an activated carbon conservation vent with an overall efficiency of 90.25% in order to comply with this limit.
- (f) The styrene monomer resin usage for the development and testing pultrusion unit shall be limited to less than 1578.90 tons per twelve (12) consecutive month period. This limit will result in total VOC and HAPs emissions from the development and testing pultrusion unit of less than 1.53 tons per twelve (12) consecutive month period. The source will use a carbon adsorption unit with an overall efficiency of 81% to control VOC emissions.
- (g) The gelcoat usage at spray booth J290 shall be limited to less than 3.09 tons per twelve (12) consecutive month period. This limit will result in total VOC and HAPs emissions from spray booth J290 of less than 0.59 tons per twelve (12) consecutive month period.

Compliance with the above limits, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC from the entire source to less than 25 tons per twelve (12) consecutive month period and render 326 IAC 2-3 and 326 IAC 2-7 not applicable.

326 IAC 2-6 (Emission Reporting)

This source is located in Porter County, the potential to emit of each criteria pollutant is less than one hundred (100) tons per year, and the actual emissions of VOC and NOx are less than twenty-five (25) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-8 (FESOP)

- (a) Pursuant to 326 IAC 2-8 (FESOP), the thermal oxidizer and the three (3) boilers shall be limited to a total of 2500 kilogallons per twelve (12) consecutive month period of No. 2 fuel oil. This limit will result in SO₂ emissions from the combustion units to less than 90 tons per twelve (12) consecutive month period. Compliance with this limit, combined with the potential to emit SO₂ from other emission units at the source shall limit the SO₂ from the entire source to less than 100 tons per twelve (12) consecutive month period and render 326 IAC 2-7 (Part 70 Permits) not applicable.
- (b) Pursuant to 326 IAC 2-8 (FESOP), the source shall limit HAPs emissions to less than 10 tons per twelve (12) consecutive month period for any individual HAP and 25 tons per

twelve (12) consecutive month period for any combination of HAPs. The HAPs emission limits are the same for VOC emission limits. See 326 IAC 2-3 (Emissions Offset) above. Compliance with the above limit, combined with the potential to emit HAPs from other emission units at the source shall limit the HAPs from the entire source to less than 10 tons for any individual HAP and less than 25 tons for any combination of HAPs per twelve (12) consecutive month period and render 326 IAC 2-7 (Part 70 Permits) not applicable.

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 Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

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

326 IAC 6-6 (Source Specific and Facility Emission Limitations for TSP in Porter County)

This source is not specifically listed in 326 IAC 6-6. Therefore, this source is not subject to 326 IAC 6-6.

326 IAC 7-4-14 (Porter County Sulfur Dioxide Emission Limitations)

This source is not specifically listed in 326 IAC 7-4-14. Therefore, this source is not subject to 326 IAC 7-4-14.

326 IAC 8-6 (Organic Solvent Emission Limitations)

This source located in Porter County and constructed after October 7, 1974 and prior to January 1, 1980, has a potential to emit less than 100 tons of VOC per year. Therefore, this source is not subject to 326 IAC 8-6.

326 IAC 8-7 (Specific VOC Reduction for Lake, Porter, Clark, and Floyd Counties)

This source must limit their potential VOC emissions to less than 25 tons per year and no individual facility has a potential to emit greater than 25 tons of VOC per year. Therefore, this source is not subject to 326 IAC 8-7.

State Rule Applicability – Reactors

326 IAC 8-1-6 (New Facilities General Reduction Requirements)

- (a) Reactor No. 1 constructed in 1973 is not subject to 326 IAC 8-1-6 because it was constructed prior to 1980, the applicability date for this rule.
- (b) Reactor No. 2 constructed in 1985 is not subject to 326 IAC 8-1-6 because it has a limited potential to emit less than 25 tons of VOC per year.

326 IAC 8-6 (Organic Solvent Emission Limitations)

The reactors, constructed in 1973 and 1985, were not constructed after October 7, 1974 and prior to January 1, 1980, the applicability dates for this rule, and do not have a potential to emit greater than 100 tons of VOC per year. Therefore, the reactors are not subject to 326 IAC 8-6.

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)

The reactors are limited to less than 25 tons of VOC per year. Therefore, the reactors are not subject to 326 IAC 8-7.

State Rule Applicability – Boilers

326 IAC 6-2-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The boiler constructed in 1973, rated at 18 MMBtu per hour, and the boiler constructed in 1977, rated at 25 MMBtu per hour, are subject to 326 IAC 6-2-2. Pursuant to 326 IAC 6-2-2, the particulate from the boilers shall be limited by the following equation:

$$Pt = 0.87/Q^{0.16}$$

Where Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
 Q = Total source maximum operating capacity (MMBtu/hr)

Based on the above equation, the boilers constructed in 1973 and 1977 shall be limited as follows:

Construction Year	Unit	Q (MMBtu/hr)	Limit (lb/MMBtu)
1973	18 million British thermal units	18	0.55
1977	25 million British thermal units	18 + 25 = 43	0.48

The potential particulate emissions from the 18 MMBtu per hour boiler constructed in 1973 is 0.014 lb/MMBtu when burning No. 2 fuel oil (worst-case fuel). This boiler is able to comply with this limit.

The potential particulate emissions from the 25 MMBtu per hour boiler constructed in 1977 is 0.014 when burning No. 2 fuel oil (worst-case fuel) lb/MMBtu. This boiler is able to comply with this limit.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The boiler constructed in 1990, rated at 12.5 MMBtu per hour, is subject to 326 IAC 6-2-4. Pursuant to 326 IAC 6-2-4, the particulate from the boiler shall be limited by the following equation:

$$Pt = 1.09/Q^{0.26}$$

Where Pt = Pounds of particulate matter per million Btu heat input (lb/MMBtu)
 Q = Total source maximum operating capacity (MMBtu/hr)

$$Pt = 1.09/55.5^{0.26}$$

$$Pt = 0.38 \text{ lb/MMBtu}$$

The potential particulate emissions from the 12.5 MMBtu per hour boiler constructed in 1990 is 0.014 lb/MMBtu when burning No. 2 fuel oil (worst-case fuel). This boiler is able to comply with this limit.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The boiler constructed in 1973, rated at 18 MMBtu per hour, the boiler constructed in 1977, rated at 25 MMBtu per hour, and the boiler constructed in 1990, rated at 12.5 MMBtu per hour have potential SO₂ greater than 25 tons per year. The boilers are capable of burning natural gas and No. 2 fuel oil. Pursuant to 326 IAC 7-1.1, the SO₂ emissions from the boilers shall be limited to less than 0.5 pounds per MMBtu.

State Rule Applicability – Storage Tanks

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

- (a) Storage tank 2, 3, 6, 8, 9, 12, 13 and 14 are subject to 326 IAC 8-9 because the tanks store volatile organic liquid and are located in Porter County. Pursuant to 326 IAC 8-9-

1(b), the storage tanks are subject to the reporting and record keeping provisions of 326 IAC 8-9-6(a) and 326 IAC 8-9-6(b).

- (b) Pursuant to 326 IAC 8-9-2(8), the storage tanks 7, 19, 20 and 21 are not subject to 326 IAC 8-9 because they are subject to 40 CFR 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984).

State Rule Applicability – Development and Testing Pultrusion Unit, Pneumatic Conveying System and Bulk Isophthalic Acid Handling System

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The particulate from the pneumatic conveying system and bulk isophthalic acid handling system shall be limited by the following:

Process	Process Weight Rate (ton/hr)	Limit (lb/hr)
Pneumatic conveying system (IPA unloading)	0.57	2.80
Bulk isophthalic acid handling system	0.57	2.80

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

When the process weight is less than 100 pounds per hour, the particulate emissions shall not exceed 0.551 pound per hour.

The potential particulate emissions from the development and testing pultrusion unit are less than 0.551 pound per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), the development and testing pultrusion unit is exempt from 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes).

State Rule Applicability – Gelcoat Booth and Resin Transfer Molding

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3, the particulate emissions from the gelcoat booth J290 shall be controlled by a dry particulate filter, waterwash, or an equivalent control device, and the permittee shall operate the control device in accordance with the manufacturer's specifications. For the gelcoat spray booth J290, the air-assisted spray application method has been determined to satisfy this requirement for a control device.

326 IAC 8-1-6 (New Facilities General Reduction Requirements)

- (a) The potential VOC emissions from the gelcoat booth are limited to less than 25 tons per year. Therefore, the gelcoat booth is not subject to 326 IAC 8-1-6.
- (b) The potential VOC emissions from the resin transfer molding operation are less than 25 tons per year. Therefore, the resin transfer molding operation is not subject to 326 IAC 8-1-6.

State Rule Applicability – Insignificant Storage Tanks

- (a) Storage tank 1, 4, 5, 7, 10, 11, 17, 18, the distillate hold tank, and the ammonium storage tank are subject to 326 IAC 8-9 because the tanks store volatile organic liquid and are in Porter County. Pursuant to 326 IAC 8-9, the storage tanks are subject to the reporting and record keeping provisions of 326 IAC 8-9-6(a) and 326 IAC 8-9-6(b).
- (b) Pursuant to 326 IAC 8-9-2(8), the storage tank 16 is not subject to 326 IAC 8-9 because they are subject to 40 CFR 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984).

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The two (2) reactors controlled by the thermal oxidizer have applicable compliance determination conditions as specified below:
 - (1) A continuous monitoring system shall be calibrated, maintained and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be greater than or equal to the temperature used to demonstrate compliance during the most recent stack test.
 - (2) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.
- (b) The thinning tanks, blend tanks, styrene flush tank, and drum off station and vent have applicable compliance monitoring conditions as specified below:
 - (1) Activated carbon canisters shall be used at all times to control styrene emissions. Emission concentrations for each carbon unit shall be measured weekly. When styrene concentrations are in excess of 50 parts per million (ppm) a stand-by set of carbon canisters shall be placed into service and the spent carbon canisters shall be removed, regenerated, and placed into stand-by service.

- (c) The storage tanks have applicable compliance monitoring conditions as specified below:
- (1) An activated carbon canister shall be used at all times to control styrene emissions. Emission concentrations for each activated carbon unit shall be measured weekly. When styrene concentrations are in excess of 50 parts per million (ppm) a stand-by set of carbon canisters shall be placed into service and the spent carbon canisters shall be removed, regenerated, and placed into stand-by service.
- (d) The pneumatic conveying system has applicable compliance monitoring conditions as specified below:
- (1) Once per day visible emissions notations of the stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. 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. 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. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
 - (2) The Permittee shall record the pressure drop across the multi-compartment baghouses used in conjunction with the pneumatic conveying system at least once per day when the pneumatic conveying system is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The testing requirements applicable to this source are as follows:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
Two (2) Reactors	Thermal Oxidizer	Within 5 years of the last valid compliant stack test	VOC	Once every 5 years	99.75% Overall Efficiency

A summary of the compliance monitoring requirements are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Two (2) Reactors: Thermal Oxidizer	Duct and Fan Amperage	Daily	Normal Range Established by Stack Test	Response Steps
	Temperature	Continuously	1318.66° F	

Control	Parameter	Frequency	Range	Excursions and Exceedances
Thinning, Blend, Styrene Flush Tanks and Drum Off State: Activated Carbon Units	Styrene Concentrations	Weekly	Styrene Concentrations > 50 ppm	Response Steps
Storage Tanks: Activated Carbon Units	Styrene Concentrations	Weekly	Styrene Concentrations > 50 ppm	Response Steps

These monitoring conditions are necessary because the thermal oxidizer and carbon adsorption units for the reactors, process tanks and storage tanks must operate properly to ensure compliance with 326 IAC 2-3 (Emission Offset).

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal (F187-25003-00003) be approved. This recommendation is based on the following facts and conditions:

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 9, 2007.

Conclusion

The operation of this stationary polyester and acrylic resin source shall be subject to the conditions of the attached FESOP Renewal No. F187-25003-00003.

**Appendix A: Emissions Calculations
Emissions Summary**

Company Name: AOC, LLC
Address City IN Zip: 2552 Industrial Drive, Valparaiso, Indiana 46383
Permit Number: F127-25003-00003

Reviewer: Anne-Marie C. Hart
Date: August 15, 2008

Process/Emission Unit	Tons/Year									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Styrene	MMA	Total Combined HAPs
Natural Gas Combustion	0.53	2.11	2.11	0.17	27.81	1.53	23.36	0.00	0.00	0.52
No. 2 Fuel Oil Combustion*	2.50	4.13	4.13	88.75	25.00	0.43	6.25	0.00	0.00	0.01
Reactors	0.00	0.00	0.00	0.00	0.00	3.12	0.00	0.00	0.00	3.12
Blend Tanks	0.00	0.00	0.00	0.00	0.00	4.20E-02	0.00	4.00E-02	2.00E-03	4.20E-02
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.19	0.06	0.25
Thinning Tanks	0.00	0.00	0.00	0.00	0.00	4.20E-02	0.00	4.00E-02	2.00E-03	4.20E-02
Drum Off Vent	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.79	0.00	0.79
Gel Coat Spray Booth	0.37	0.37	0.37	0.00	0.00	0.59	0.00	0.40	0.19	0.59
Resin Transfer Molding	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.72	0.00	0.72
Pultrusion Unit	0.00	0.00	0.00	0.00	0.00	1.53	0.00	1.53	0.00	1.53
Conveying, Loading, Unloading and Handling**	0.00	0.00	0.00	0.00	0.00	15.29	0.00	5.48	0.00	13.20
Insignificant Activities***	7.04	5.51	5.51	0.40	3.90	0.36	0.75	0.00	0.00	0.00
Total	10.44	12.12	12.12	89.32	56.71	24.69	30.36	9.19	0.25	20.82

Emission Summary based on limited throughput and use of control equipment

* Emissions based on fuel consumption limit

** Indicates Fugitive Emissions

*** Based on TSD from F127-13997-00003

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

Company Name: AOC, LLC
Address City IN Zip: 2552 Industrial Drive, Valparaiso, Indiana 46383
Permit Number: F127-25003-00003

Reviewer: Anne-Marie C. Hart
Date: August 15, 2008

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

63.5

556.3

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	PM2.5	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.5	2.1	2.1	0.2	27.8	1.5	23.4

*PM emission factor is filterable PM only. PM10 and PM2.5 emission factor is filterable and condensable PM10 and PM2.5 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

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.84E-04	3.34E-04	2.09E-02	5.01E-01	9.46E-04

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.39E-04	3.06E-04	3.89E-04	1.06E-04	5.84E-04
	Total HAPs				5.25E-01

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
#1 and #2 Fuel Oil
Unlimited Fuel Consumption

Company Name: AOC, LLC
Address, City IN Zip: 2552 Industrial Drive, Valparaiso, Indiana 46383
Permit Number: F127-25003-00003
Plt ID:
Reviewer: Anne-Marie C. Hart
Date: August 15, 2008

Heat Input Capacity Potential Throughput S = Weight % Sulfur
MMBtu/hr kgals/year 0.5

63.5

3973.28571

Emission Factor in lb/kgal	Pollutant						
	PM*	PM10	PM2.5	SO2	NOx	VOC	CO
	2.0	3.3	3.3	71 (142.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	4.0	6.6	6.6	141.1	39.7	0.7	9.9

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

All condensable PM is assumed to be less than 1.0 micron in diameter.

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

Emission Factor in lb/mmBtu	HAPs - Metals				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	1.11E-03	8.34E-04	8.34E-04	8.34E-04	2.50E-03

Emission Factor in lb/mmBtu	HAPs - Metals (continued)			
	Mercury	Manganese	Nickel	Selenium
	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	8.34E-04	1.67E-03	8.34E-04	4.17E-03
	Total HAPs			1.36E-02

Methodology

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Appendix A: Emissions Calculations

#1 and #2 Fuel Oil

Limited Fuel Consumption

Company Name: AOC, LLC
Address, City IN Zip: 2552 Industrial Drive, Valparaiso, Indiana 46383
Permit Number: F127-25003-00003
Pit ID: 127-00003
Reviewer: Anne-Marie C. Hart
Date: August 15, 2008

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur 0.5
63.5	2500	

Emission Factor in lb/kgal	Pollutant						
	PM*	PM10	PM2.5	SO2	NOx	VOC	CO
	2.0	3.3	3.3	71 (142.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	2.5	4.1	4.1	88.8	25.0	0.4	6.3

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

All condensable PM is assumed to be less than 1.0 micron in diameter.

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

Emission Factor in lb/mmBtu	HAPs - Metals				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	1.11E-03	8.34E-04	8.34E-04	8.34E-04	2.50E-03

Emission Factor in lb/mmBtu	HAPs - Metals (continued)			
	Mercury	Manganese	Nickel	Selenium
	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	8.34E-04	1.67E-03	8.34E-04	4.17E-03
	Total HAPs			1.36E-02

Methodology

No data was available in AP-42 for organic HAPs.

Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Company Name: AOC, LLC
Address, City IN Zip: 2552 Industrial Drive, Valparaiso, Indiana 46383
Permit Number: F127-25003-00003
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Reviewer: Anne-Marie C. Hart
Date: August 15, 2008

Reactors

Vapor Phase:

Limited Throughput	50,000	tons/year
Yield Loss	15%	
Vapor	12%	
VOC Content	20%	
Control Efficiency	99.75%	
Limited PTE	0.45	tons/year

Liquid Phase:

Limited Throughput	50,000	tons/year
Yield Loss	15%	
Distillate	95%	
VOC Content	15%	
Control Efficiency	99.75%	
Limited PTE	2.67	tons/year

Limited Throughput pursuant to FESOP 127-13997-00003 issued April 8, 2003

Methodology

Limited PTE (ton/year) = Limited throughput (tons/year) x yield loss x vapor or distillate percentage x VOC content x (1-Control Efficiency)

Yield Loss: Worst-case percentage based on production data

Vapor: Worst-case percentage of loss that is vapor

Distillate: Worst-case percentage of loss that is distillate

VOC Content: VOC content of vapor and distillate based on sampling and testing data

Control Efficiency: Based on approved stack test completed October 2004

Drum Off Station:

Throughput	6015	tons/year
Emission Factor	0.00135	tons VOC/ton product
Control Efficiency	90.25%	
Limited PTE	0.79	tons/year

Methodology

Limited PTE (ton/year) = Throughput (tons/year) x Emission Factor (ton/ton) x (1-control efficiency)

Emission Factor from AP-42, Table 6.6.3-1 for Polystyrene

Reviewer: Anne-Marie C. Hart
 Date: August 15, 2008

**AOC, LLC
 Tanks**

Thinning and Blending Tanks

	Limited Throughput (tons/yr)	Emission Factor for VOC (lb styrene/lb resin)	Emission Factor for Styrene (lb styrene/lb resin)	Emission Factor for MMA (lb MMA/lb resin)	Limited Styrene Emissions (tons/yr)	Limited MMA Emissions (tons/yr)	Control Efficiency	Controlled Limited Styrene Emissions (tons/yr)	Controlled Limited MMA Emissions (tons/yr)
100% Styrene Thinner	94,365	4.2400E-05	4.2400E-05	0.0000	4.0011	0.0000	99%	0.0400	0.0000
95% Styrene/5% MMA Thinner*	94,365	4.2400E-05	4.0280E-05	2.1200E-06	4.0011	0.2001	99%	0.0400	0.0020
Blend 1 through Blend 6 w/ 100% styrene blend	94,365	4.2400E-05	4.2400E-05	0.0000	4.0011	0.0000	99%	0.0400	0.0000
Blend 1 through Blend 6 w/ 95/5% styrene/MMA blend*	94,365	4.2400E-05	4.0280E-05	2.1200E-06	4.0011	0.2001	99%	0.0400	0.0020

* Indicates Worst-Case Process - Limits and Total Emissions based on this worst-case operating scenario

Notes:

Emission Factors based on vapor density and vapor fraction of the resin components.

Control Efficiency: Unit one - 90.25%; Unit 2 - 92%; the units are in series, therefore overall efficiency is 99.22%;

Storage Tanks

Tank	Limited VOC Emissions (lbs/year)	Limited styrene Emissions (lbs/year)	Limited MMA Emissions (lbs/year)	Limited VOC Emissions (tons/yr)	Limited Styrene Emissions (tons/year)	Limited MMA Emissions (tons/year)	Controlled Limited VOC Emissions (ton/yr)	Controlled Limited Styrene Emissions (ton/yr)	Controlled Limited MMA Emissions (ton/yr)
Storage 2	119.04	90.59	28.45	0.05952	0.045295	0.014225	0.005952	0.0045295	0.0014225
Storage 3	229.97	175.01	54.96	0.114985	0.087505	0.02748	0.0114985	0.0087505	0.002748
Storage 6	234.32	178.32	56	0.11716	0.08916	0.028	0.011716	0.008916	0.0028
Storage 7	234.32	178.32	56	0.11716	0.08916	0.028	0.011716	0.008916	0.0028
Storage 8	788.3	599.91	188.39	0.39415	0.299955	0.094195	0.039415	0.0299955	0.0094195
Storage 9	788.3	599.91	188.39	0.39415	0.299955	0.094195	0.039415	0.0299955	0.0094195
Storage 12	412.94	314.25	98.69	0.20647	0.157125	0.049345	0.020647	0.0157125	0.0049345
Storage 13	412.94	314.25	98.69	0.20647	0.157125	0.049345	0.020647	0.0157125	0.0049345
Storage 14	412.94	314.25	98.69	0.20647	0.157125	0.049345	0.020647	0.0157125	0.0049345
Storage 19	530.31	403.58	126.74	0.265155	0.20179	0.06337	0.0265155	0.020179	0.006337
Storage 20	447.51	340.56	106.95	0.223755	0.17028	0.053475	0.0223755	0.017028	0.0053475
Storage 21	447.51	340.56	106.95	0.223755	0.17028	0.053475	0.0223755	0.017028	0.0053475
Total				2.5292	1.924755	0.60445	0.25292	0.1924755	0.060445

Emissions are based on Tanks 4.0.

Limited throughput for Blend Tanks from permit is 94,365 tons/yr. At a density of about 7.55 lbs/gal, this is about 500 turnovers/yr/tank, assuming full tanks.

Limited throughput for Storage Tanks from permit is 155,935 tons/yr. At a density of about 7.55 lbs/gal, this is about 63 turnovers/yr/tank, assuming full tanks.

Company Name: AOC, LLC
 Address, City IN Zip: 2552 Industrial Drive, Valparaiso, Indiana 46383
 Permit Number: F127-25003-00003

Reviewer: Anne-Marie C. Hart
 Date: August 15, 2008

Gelcoat Spray Booth

Unlimited Emissions

Maximum Usage Rate (lb/hr)	Maximum Usage Rate (tons/yr)	Styrene Content by wt.	MMA Content by wt.	UEF Styrene Emission Factor (lb/ton)	UEF MMA Emission Factor (lb/ton)	Uncontrolled and unlimited Styrene Emissions (tons/yr)	Uncontrolled and unlimited MMA Emissions (tons/yr)	Uncontrolled and unlimited PM Emissions (tons/yr)	Total Unlimited VOC Emissions (tons/year)*
74.05	324.339	40%	8%	259	120	42.00	19.46	38.92	61.46

Limited Emissions

Limited Usage (tons/yr)	Styrene Content by wt.	MMA Content by wt.	UEF Styrene Emission Factor (lb/ton)	UEF MMA Emission Factor (lb/ton)	Limited Styrene Emissions (tons/yr)	Limited MMA Emissions (tons/yr)	Limited PM Emissions (tons/yr)	Total Limited VOC Emissions (tons/year)*
3.09	40%	8%	259	120	0.40	0.19	0.37	0.59

Emission Factors from American Composites Manufacturers Association "Unified Emission Factors for Open Molding of Composites" (July 23, 2001)

Limited Emissions Styrene/MMA (tons/yr) = Limited Usage (tons/yr) x Emission Factor (lb/ton) x 1 ton/2000 lbs

Limited PM Emissions (tons/yr) = Limited Usage (tons/yr) x solid content (60%) x (1 - Transfer Efficiency (80%)

* Styrene and MMA are both HAPs and VOC

Resin Transfer Molding

Maximum Usage (lbs/hr)	Styrene Content by wt.	Emission Factor (weight % of starting monomer emitted)	Potential to Emit Styrene (tons/year)
43.83	37.50%	1%	0.72

PTE (tons/yr) = Resin Usage (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs x % Styrene x Emission Factor
 Emission Factor from AP-42, Table 4.4-2 for closed molding

Total Unlimited PTE of VOCs for Gelcoat Spray Booth and Resin Transfer Molding
Total Limited PTE of VOCs for Gelcoat Spray Booth and Resin Transfer Molding

62.18 tons/year
1.31 tons/year

Company Name: AOC, LLC
 Address, City IN Zip: 2552 Industrial Drive, Valparaiso, Indiana 46383
 Permit Number: F127-25003-00003

Reviewer: Anne-Marie C. Hart
 Date: August 15, 2008

Pultrusion Unit

Limited Styrene Usage:	1578.9	tons/year
Styrene Content:	34%	
Density:	9.2	lbs/gallon
Emission Factor:	1.50%	styrene emitted/styrene used
Overall Efficiency of Carbon Adsorption:	81%	
Limited Uncontrolled Emissions:	8.05239	tons/year
Limited Controlled Emissions:	1.53	tons/year

Emission Factor from Society of Plastics Industry

Limited Emissions (ton/year) = Limited Usage (tons/yr) x Styrene Content x Emission Factor x (1-Overall Efficiency)

This unit is considered an insignificant activity pursuant to 326 IAC 2-7-1(21)(E) Research and Development Activities

Loading, Conveying, Unloading, Handling

Total Loading and Unloading Throughput:	292,900	tons/yr
Emission Factor:	5.22E-05	ton VOC/ton processed
Percent Total HAP of Mixture:	86.33%	
Percent Styrene Content:	35.84%	
Loading and Unloading VOC Emissions:	15.29	tons/yr
Loading and Unloading HAP Emissions:	13.2	tons/yr
Loading and Unloading Styrene Emissions:	5.48	tons/yr

Emission Factor based on mass balance

Emissions (tons/yr) = Throughput (tons/yr) x Emission Factor (ton/ton)

The emissions from this operation are considered fugitive

Percent HAP and percent styrene based off of percentage of HAP and styrene in blending and mixing raw materials.

HAP Emissions (tons/year) = VOC emissions (tons/year) x Percent Total HAP of Mixture

Styrene Emissions (tons/year) = VOC emissions (tons/year) x Percent Styrene Content