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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	March 11, 2015
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Eco Services Operations LLC
Permit Level:	Title V Significant Permit Modification
Permit Number:	089-35209-00242
Source Location:	2000 Michigan Street Hammond, Indiana
Type of Action Taken:	Modification at an existing source

Notice of Decision: Approval - Effective Immediately

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

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 35209.

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

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

Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) 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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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.

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Michael R. Pence
Governor

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Commissioner

Mr. Greg Yates
Eco Service Operations, LLC
2000 Michigan Street
Hammond, IN 46230

March 11, 2015

Re: 089-35209-00242
Significant Permit Modification to
Part 70 Renewal No.: T089-33025-00242

Dear Mr. Yates,

Eco Service Operations, LLC was issued a Part 70 Operating Permit Renewal No. 089-33025-00242 on May 30, 2014 for a stationary sulfuric acid manufacturing operation located at 2000 Michigan Street, Hammond, IN 46320. An application requesting changes to this permit was received on November 3, 2014. Pursuant to the provisions of 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

Please find attached the entire Part 70 Operating Permit as modified, including the following new and revised attachments:

Appendix A: Alternative Monitoring Plan for SO_2 Emissions
Attachment A: 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 (revised)
Attachment B: 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants (revised)
Attachment C: 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (new)

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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Deena Patton, of my staff, at 317-234-5400 or 1-800-451-6027, and ask for extension 4-5400.

Sincerely,

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

Attachment(s): Updated Permit, Technical Support Document and Appendix A

TS/dp

cc: File - Lake County
Lake County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
IDEM Northwest Regional Office

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Governor

Thomas W. Easterly
Commissioner

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Eco Services Operations LLC
2000 Michigan Street
Hammond, Indiana 46320

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: 089-33025-00242	
Original Signed by/Issued by: Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: May 30, 2014 Expiration Date: May 30, 2019

Significant Permit Modification No.: 089-35209-00242	
Issued by: Tripurari Sinha Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: March 11, 2015 Expiration Date: May 30, 2019

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Appendix A: Alternative Monitoring Plan for SO2 Emissions

Attachment A: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60, Subpart Kb]

Attachment B: Standards of Performance for Sulfuric Acid Plants [40 CFR 60, Subpart H]

Attachment C: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary sulfuric acid manufacturing operation.

Source Address:	2000 Michigan Street, Hammond, Indiana 46320
General Source Phone Number:	(219) 853-7127
SIC Code:	2819
County Location:	Lake
Source Location Status:	Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major 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 2-7-4(c)(3)][326 IAC 2-7-5(14)]

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

(a) One (1) natural gas fired boiler, identified as the Package Boiler, constructed in 1980 rated at ninety-four and three tenths (94.3) MMBtu per hour, exhausting at one (1) stack, identified as D011. The Package Boiler is used to provide supplemental plant steam when Unit 4 is not in operation or is unable to meet the demand.

(b) One (1) natural gas fired furnace, identified as the Unit 4 Preheater, constructed in 1962, rated at forty-two (42) MMBtu per hour, exhausting at one (1) stack, identified as D021. The Unit 4 Preheater is used to heat the back half of Unit 4 following a long shutdown.

(c) One (1) natural gas fired furnace, identified as the John Zink Furnace, constructed in 1981, rated at fifty-one (51) MMBtu per hour, exhausting through the Unit 4 stack, identified as D031, or through the exit of the quench tower. The John Zink Furnace is used to heat the front half of Unit 4 following a long shutdown.

(d) Five (5) spent acid storage tanks, identified as tank Nos. 46, 47, 56, 57, and 58. Emissions from these tanks are controlled by the Unit 4 furnace or by the caustic scrubber and vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the caustic scrubber and vapor combustor. The tanks may be vented directly to the atmosphere when they contain only fresh sulfuric acid product. Spent sulfuric acid tank trucks and railcars utilize the same control equipment during unloading activities and will be considered part of this emission unit. Reloading of tank trucks and railcars with fresh acid also results in VOC and sulfur dioxide emissions that are considered part of this emission unit. Emissions from reloading with fresh acid are uncontrolled. Tank specifications are as follows:

(1) Tank 46 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1958.

(2) Tank 47 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1987.

(3) Tank 56 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(4) Tank 57 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(5) Tank 58 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

These are affected facilities under 40 CFR 60, Subpart Kb.

(e) Two (2) raw material storage tanks, identified as tank Nos. 70 and 71, with capacities of 56,400 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. Tanks 70 and 71 were constructed in 1986 and 1985 respectively. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, Eco Services Operations LLC will not vent railcars simultaneously. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). The company considers these to be insignificant activities.

These are affected facilities under 40 CFR 60, Subpart Kb.

(f) Four (4) raw material storage tanks, identified as tank Nos. 72, 73, 74, and 75, with capacities of 8,000 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. All four tanks were constructed in 1985. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, Eco Services Operations LLC will not vent railcars simultaneously. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). The company considers these to be insignificant activities.

(g) One (1) molten sulfur storage tank, identified as tank 21R, with a capacity of 80,000 gallons, and constructed in 1997. The tank exhausts to the atmosphere through a stack identified as D081. Molten sulfur tank truck unloading will be considered part of this emission unit.

(h) One (1) sulfuric acid regeneration unit, identified as Unit 4, constructed in 1958, with a maximum acid production rate of 58.33 tons per hour. Raw materials fed to the unit include spent sulfuric acid, molten sulfur, and other sulfur-bearing materials. The unit includes one (1) furnace firing natural gas and non-hazardous alternative fuels. Acid mist emissions from Unit 4 are controlled by a Brinks mist eliminator before exhausting through one (1) stack, identified as D031. Sulfur dioxide emissions are controlled in the process by a double absorption system.

This is an affected facility under 40 CFR 60, Subpart H.

A.3 Specifically Regulated Insignificant Activities
[326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

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

(a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.8-3

(b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6.8]

(c) Asbestos abatement projects regulated by 326 IAC 14-10.

(d) Two (2) Emergency compression ignition generators less than 500 HP, ordered in 2000 and 2004. (This is an affected facility under 40 CFR Part 63, Subpart ZZZZ)

(e) One (1) fire pump compression ignition RICE engine less than 500 HP, ordered in 1986. (This is an affected facility under 40 CFR Part 63, Subpart ZZZZ)

(f) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6.8]

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

(h) Catalyst screening with particulate emission control. [326 IAC 6.8]

(i) Sand blasting. [326 IAC 6.8]

A.4 Insignificant Activities not Specifically Regulated [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities:

(a) Propane or liquefied petroleum gas, or butane fired space heaters, process heaters, heat treatment furnaces, and/or boilers with heat input equal to or less than six million (6,000,000) Btu per hour, consisting of the following:

(1) One (1) portable propane torpedo heater

(b) Combustion source flame safety purging on startup.

(c) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300

gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(d) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 3,500 gallons per day.

(e) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

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

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

(h) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.

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

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

(k) Cleaners and solvents characterized as follows:
(1) having a vapor pressure equal to or less than 2kPa; 15mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;

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

(l) Closed loop heating and cooling systems.

(m) Cutting 200,000 linear feet or less of one inch (1") plate or equivalent.

(n) Using 80 tons or less of welding consumables.

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

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

(q) Two (2) cell forced draft non-contact cooling tower system (4 fans), with a capacity of 16,000 gallons per minute, not regulated under a NEHAP.

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

(s) Heat exchanger cleaning and repair.

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

(u) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.

(v) Paved and unpaved roads and parking lots with public access.

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

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

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

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

(aa) Purge double block and bleed valves.

(bb) Filter or coalescer media changeout.

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

(dd) Non-hazardous truck activities.

(ee) Valves and flanges.

(ff) Acid filter precoat vent.

(gg) Emissions associated with washing stack D031

(hh) Portable containers > 0.46 cubic meters used for the collection, storage or disposal of materials; the containers are closed, except when the material is added or removed.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, 089-33025-00242, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

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

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

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

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

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

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

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

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

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

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

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

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553**.**

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

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

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

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

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to 089-33025-00242 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or

anticipated noncompliance does not stay any condition of this permit.
[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(1) That this permit contains a material mistake.

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

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

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

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

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes

final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

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

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

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

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

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

(3) Any change in emissions; and

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

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

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

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

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

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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

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

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

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

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

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

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

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

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

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

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

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

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

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

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

C.5 Fugitive Particulate Matter Emissions [326 IAC 6.8-10-3]

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

(a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).

(b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).

(c) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.

(e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.

(g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).

(h) Material processing facilities shall include the following:

(1) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

(2) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(3) The PM_{10} stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.

(5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).

(i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(j) Material transfer limits shall be as follows:

(1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(2) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.

(3) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:

(A) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.

(B) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).

(k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

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

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of

permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.10 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8]

(a) Pursuant to 326 IAC 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.

(b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy of any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, if required to IDEM, OAQ within thirty (30) days of the update.

(c) Pursuant to 326 IAC 6.8-8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8.

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

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

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

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

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

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

C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

(e) The Permittee shall record the reasonable response steps taken.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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. 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). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or 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.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), the Permittee shall submit by July 1 an emission statement covering the previous calendar year as follows:

(1) starting in 2004 and every three (3) years thereafter, and

(2) any year not already required under (1) if the source emits volatile organic compounds or oxides of nitrogen into the ambient air at levels equal to or greater than twenty-five (25) tons during the previous calendar year.

(b) The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

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

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

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

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

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

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

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

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

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

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

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

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

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

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2][326 IAC 2-3] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(b) The address for report submittal is:

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

Indianapolis, Indiana 46204-2251

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

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

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

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

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

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

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

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

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS

Package Boiler

Emission Unit Description

(a) One (1) natural gas fired boiler, identified as the Package Boiler, constructed in 1980, rated at ninety-four and three-tenths (94.3) MMBtu per hour, exhausting at one (1) stack, identified as D011. The Package Boiler is used to provide supplemental plant steam when Unit 4 is not in operation or is unable to meet the demand.

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

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

D.1.1 Particulate Matter Less Than 10 Microns in Diameter (PM10) [326 IAC 6.8-2-30]

Pursuant to 326 IAC 6.8-2-30 (Lake County PM10 emission requirements), PM10 emissions from the package boiler shall not exceed 0.755 pounds per hour or 0.007 pounds per MMBtu.

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.3 PM10 Continuous Compliance [326 IAC 6.8-8]

Pursuant to the source's continuous compliance plan, continuous compliance with the PM10 emission limitation shall be demonstrated by measuring the volume of natural gas fired in the package boiler on an hourly basis and multiplying that volume by the corresponding AP-42 mission factor. The equation used to calculate PM10 emissions is as follows:

To determine PM_{10} emission rate in lbs/hr:

PM_{10} emissions = [measured gas volume (ft^3/hr)]*[AP-42 FACTOR (1.9 LB/10^6 FT^3)]

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

D.1.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.3, the Permittee shall calculate and record (on an hourly basis) the PM10 emission rate from the package boiler, in units of pounds per hour. The Permittee shall also record the quantity of natural gas fired in the package boiler (on an hourly basis) in units of cubic feet per hour.

(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS

Unit 4 Preheater
Emission Unit Description (b) One (1) natural gas fired furnace, identified as the Unit 4 Preheater, constructed in 1962, rated at forty-two (42) MMBtu per hour, exhausting at one (1) stack, identified as D021. The Unit 4 Preheater is used to heat-up the back half of Unit 4 following a long shutdown. (The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

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

D.2.1 Particulate Matter Less Than 10 Microns in Diameter (PM10) [326 IAC 6.8-2-30]

Pursuant to 326 IAC 6.8-2-30 (Lake County PM10 emission requirements), PM10 emissions from the Unit 4 Preheater shall not exceed 0.230 pounds per hour or 0.007 pounds per MMBtu.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan~~,~~ is required for this emission unit. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.2.3 PM10 Continuous Compliance [326 IAC 6.8-8]

Pursuant to the source's continuous compliance plan, continuous compliance with the PM10 emission limitation shall be demonstrated by measuring the volume of natural gas fired in the Unit 4 Preheater on an hourly basis and multiplying that volume by the corresponding AP-42 emission factor. The equation used to calculate PM10 emissions is as follows:

To determine PM10 emission rate in lbs/hr:

PM10 emissions = [measured gas volume (ft^3/hr)]*[AP-42 FACTOR (1.9 LB/10^6 FT^3)]

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

D.2.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.3, the Permittee shall calculate and record (on an hourly basis) the PM10 emission rate from the Unit 4 Preheater, in units of pounds per hour. The Permittee shall also record the quantity of natural gas fired in the Unit 4 Preheater (on an hourly basis), in units of cubic feet per hour.

(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.3 EMISSION UNIT OPERATION CONDITIONS

Raw Material Storage Tanks 72 through 75

Emission Unit Description

(f) Four (4) raw material storage tanks, identified as tank Nos. 72, 73, 74, and 75, with capacities of 8,000 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. All four tanks were constructed in 1985. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, Eco Services Operations Inc. will not vent railcars simultaneously. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example).The company considers these to be insignificant activities.

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

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

D.3.1 Record Keeping Requirements [326 IAC 8-9-6(b)]

(a) The Permittee shall maintain records of the following information for each vessel:

(1) The vessel identification number.

(2) The vessel dimensions.

(3) The vessel capacity.

(b) The Permittee shall maintain these records for the life of each vessel.

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

SECTION D.4 EMISSION UNIT OPERATION CONDITIONS

Sulfuric Acid Regeneration Unit (Unit 4)

Emission Unit Description

(h) One (1) sulfuric acid regeneration unit, identified as Unit 4, constructed in 1958, with a maximum acid production rate of 58.33 tons per hour. Raw materials fed to the unit include spent sulfuric acid, molten sulfur, and other sulfur-bearing materials. The unit includes one (1) furnace firing natural gas and non-hazardous alternative fuels. Acid mist emissions from Unit 4 are controlled by a Brinks mist eliminator before exhausting through one (1) stack, identified as D031. Sulfur dioxide emissions are controlled in the process by a double absorption system.

This is an affected facility under 40 CFR 60, Subpart H.

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

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

D.4.1 Particulate Matter Less Than 10 Microns in Diameter (PM10) [326 IAC 6.8-2-30]

Pursuant to 326 IAC 6.8-2-30 (Lake County PM10 emission requirements), acid mist emissions from Unit 4 shall not exceed 6.958 pounds per hour or 0.150 pounds per ton, the production being expressed as 100 percent H2SO4.

D.4.2 Sulfur Dioxide (SO2) [326 IAC 7-4.1-15] [Consent Decree 2:07CV134 WL]

(a) Pursuant to 326 IAC 7-4.1-15(a) (Lake County sulfur dioxide emission limitations), the SO2 emissions from Unit 4 shall not exceed seven hundred eighty-two (782) pounds per hour, on a three (3) hour average basis.

(b) Pursuant to Significant Source Modification 089-35105-00242 and as specified in Consent Decree 2:07CV134 WL, the SO2 emissions from Unit 4 shall not exceed a long-term limit of two and one half (2.5) pounds per ton of 100% sulfuric acid produced and/or a short-term limit of three and one half (3.5) pounds per ton. These emission limits shall not be relaxed by any future permit action. Compliance with the long-term limit shall be achieved no later than July 1, 2008. Compliance with the long term and short-term limit will be demonstrated using SO2 analyzers at the converter inlet and stack using the procedures in Appendix A (Alternative Monitoring Plan for SO2 Emissions).

The following definitions shall apply for this condition:

(1) “100% sulfuric acid produced” shall mean the stoichiometric quantity of sulfuric acid that would be produced at Unit 4 if all sulfur trioxide (SO3) exiting the converter were used to produce anhydrous sulfuric acid. For purposes of this definition, scrubber byproduct shall be considered to be included in “100% sulfuric acid produced”;

(2) “Long-term limit” shall mean a sulfur dioxide (SO2) emission limit expressed as pounds per ton of 100% sulfuric acid produced, averaged over all Operating Hours in a rolling 365-day period;

(3) “Short-term limit” shall mean the SO2 emission limit expressed as pounds per ton of 100% sulfuric acid produced, averaged over each rolling 3-hour period. The short-term limit shall not apply during periods of Startup, Shutdown and Malfunction;

(4) "Operating hours" shall mean periods during which sulfur or sulfur-bearing compounds, excluding conventional fossil fuels such as natural gas or fuel oils, are being fed to the furnace;

(5) "Startup" shall mean the 24-hour period beginning when the feed of sulfur or sulfur-bearing materials, excluding conventional fossil fuels such as natural gas or fuel oils, to the furnace commences after a main gas blower shutdown;

(6) "Shutdown" shall mean the cessation of operation of Unit 4 for any reason. Shutdown begins at the time sulfur or sulfur-bearing feeds, excluding conventional fossil fuels such as natural gas or fuel oils, to the furnaces ceases; and

(7) "Malfunction" shall mean, consistent with 40 CFR 60.2, any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or process to operate in a normal or usual manner, but shall not include failures that are caused in part by poor maintenance or careless operation.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for this emission unit and its control equipment. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

D.4.4 HAPs Minor Limit [40 CFR 63] [326 IAC 20-1]

The mass of chlorides charged to Unit 4 shall not exceed 1,575 tons per consecutive twelve month period with compliance determined at the end of each month. The emissions of hydrochloric acid (HCl) shall not exceed 10.28 lbs per ton of chlorides charged to Unit 4.

Compliance with the above condition shall limit single HAP emissions from the entire source to less than 10 tons per year and shall limit the total combined HAP emissions to less than twenty-five (25) tons per year and will make the source an area source for HAPs.

Compliance Determination Requirements

D.4.5 Testing Requirements [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.4.1 - acid mist emissions, the Permittee shall perform stack testing at the Unit 4 stack, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

D.4.6 Control of Particulate Emissions (PM10) [40 CFR 64]

Unit 4 shall be vented to the final Brink's mist eliminator at all times while the unit is in operation, with the exception of cold startups when feeding only natural gas to the furnace.

D.4.7 Continuous Emissions Monitoring Requirement [326 IAC 7-4.1-15(b)]

Pursuant to 326 IAC 7-4.1-15(b), the Permittee shall operate a continuous analyzer in the stack serving Unit 4.Pursuant to Consent Decree 2:07CV134 WL, the Permittee shall operate a continuous analyzer in the duct between the Unit 4 Dry Tower and Unit 4 Converter. This dual-analyzer CEMS shall be operated and maintained in accordance with the procedures in Appendix A (Alternative Monitoring Plan for SO2 Emissions).

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

D.4.8 PM_{10} Continuous Compliance [326 IAC 6.8-8] [40 CFR 64]

Pursuant to the source's continuous compliance plan, continuous compliance with the acid mist emission limitation shall be demonstrated by calculating the sulfuric acid production rate and multiplying that rate by an acid mist emission factor obtained from the most recent performance test. The acid mist emission factor will be obtained by dividing the acid mist emission rate measured during the test by the sulfuric acid production rate. The equation used to calculate acid mist emissions is as follows:

To determine acid mist emission rate in lbs/hr:

Acid mist emissions = [emission factor from stack test (lb/ton)]*[production rate (tons/hr)]

D.4.9 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the Unit 4 stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.4.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.1, the Permittee shall calculate and record (on an hourly basis) the acid mist emission rate from Unit 4, in units of pounds per hour.

(b) To document the compliance status with Condition D.4.9, the Permittee shall maintain records of daily visible emissions notations for the Unit 4 stack exhaust. The Permittee shall include in its daily record when a visible emissions notation is not taken and the reason for the lack of the visible emissions notation, (e.g., the process did not operate that day).

(c) To document the compliance status with Condition D.4.2(a), the quantity of sulfur dioxide emitted from the Unit 4 stack shall be recorded in pounds per hour, on a three (3) hour average basis, in units of pounds per hour.

(d) The quantity of sulfuric acid produced (on a 100% H_2SO4 equivalent basis) by Unit 4 shall be recorded once every hour during all Operating Hours, in units of tons per hour.

(e) The fractional concentration of SO_2 entering the Converter shall be recorded once every five (5) minutes during all operating hours, as defined in the Alternative Monitoring Plan.

(f) The fractional concentration of SO_2 at the stack shall be recorded once every five (5) minutes during all operating hours, as defined in the Alternative Monitoring Plan.

(g) The short-term sulfur dioxide emission rate shall be calculated and recorded once every five minutes during all operating hours, except periods of startup, shutdown or malfunction, in accordance with the Alternative Monitoring Plan contained in Appendix A.

(h) Beginning on July 1, 2008, the long-term sulfur dioxide emission rate shall be calculated and recorded on a daily basis in accordance with the Alternative Monitoring Plan contained in Appendix A. The Permittee shall maintain records of the short-term and long-term sulfur dioxide emission rates required to be calculated as described in the Alternative Monitoring Plan contained in Appendix A.

(i) The Permittee shall record the quantity of natural gas burned in the Unit 4 furnace on an hourly basis, in units of million cubic feet per hour.

(j) The Permittee shall record the quantity of spent acid fed to the Unit 4 furnace on a monthly basis, in units of pounds or gallons per minute.

(k) The Permittee shall record the quantity of molten sulfur fed to the Unit 4 furnace on a monthly basis, in units of pounds per minute.

(l) To document the compliance status with Condition D.4.4, the Permittee shall maintain records of the quantity of chlorides fed to the Unit 4 furnace on a monthly basis. These records shall be based on annual certification analyses of the materials fed to the Unit 4 furnace. For materials fed from storage tanks, an average value may be used.

(m) The Permittee shall record the quantity of non-hazardous alternative fuels fed to the Unit 4 furnace on an hourly basis, in units of pounds or gallons per hour.

(n) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligation with regard to the records required by this condition.

D.4.11 Reporting Requirements

(a) Pursuant to 326 IAC 7-4.1-15(b), the Permittee shall submit a report to IDEM, OAQ, and IDEM not later than 30 days after the end of each calendar quarter. The report shall contain the following information:

(1) Three (3) hour average sulfur dioxide emission rate in pounds per hour as measured by the CEMS from Unit 4 for each three (3) hour period during the calendar quarter in which the average emissions exceed the allowable rates specified in Condition D.4.2(a).

(2) The daily average emission rate in units of pounds per ton as determined from CEMS and production data for Unit 4 for each day of the calendar quarter.

(b) Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1 (35).

SECTION E.1 EMISSION UNIT OPERATION CONDITIONS

Spent Sulfuric Acid Storage Tanks (46,47, 56, 57, and 58) and Raw Material Storage Tanks (70 and 71)

Emission Unit Description

(d) Five (5) spent acid storage tanks, identified as tank Nos. 46, 47, 56, 57, and 58. Emissions from these tanks are controlled by the Unit 4 furnace or by the caustic scrubber and vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the caustic scrubber and vapor combustor. The tanks may be vented directly to the atmosphere when they contain only fresh sulfuric acid product. Spent sulfuric acid tank trucks and railcars utilize the same control equipment during unloading activities and will be considered part of this emission unit. Reloading of tank trucks and railcars with fresh acid also results in VOC and sulfur dioxide emissions that are considered part of this emission unit. Emissions from reloading with fresh acid are uncontrolled. Tank specifications are as follows:

(1) Tank 46 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1958.

(2) Tank 47 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1987.

(3) Tank 56 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(4) Tank 57 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(5) Tank 58 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

These are affected facilities under 40 CFR 60, Subpart Kb.

(e) Two (2) raw material storage tanks, identified as tank Nos. 70 and 71, with capacities of 56,400 gallons each**.** Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace by unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. Tanks 70 and 71 were constructed in 1986 and 1985, respectively. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, Eco Services Operations LLC will not vent railcars simultaneously. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). The company considers these to be insignificant activities.

These are affected facilities under 40 CFR 60, Subpart Kb.

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

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

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, for the above listed emission units, except as otherwise specified in 40 CFR Part 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.1.2 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 NSPS [326 IAC 12] [40 CFR Part 60, Subpart Kb]

Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Kb, which are incorporated by reference as 326 IAC 12 (included as Attachment A to this permit), for the above listed emissions units as specified as follows:

(1) 40 CFR 60.110b(a)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(3)
(4) 40 CFR 60.113b(c)
(5) 40 CFR 60.115b(c)
(6) 40 CFR 60.116b(a), (b), (e), (f), and (g)

SECTION E.2. EMISSION UNIT OPERATION CONDITIONS

Spent Sulfuric Acid Regeneration Unit (Unit 4)

Emission Unit Description

(h) One (1) sulfuric acid regeneration unit, identified as Unit 4, constructed in 1958, with a maximum acid production rate of 58.33 tons per hour. Raw materials fed to the unit include spent sulfuric acid, molten sulfur, and other sulfur-bearing materials. The unit includes one (1) furnace firing natural gas and non-hazardous alternative fuels. Acid mist emissions from Unit 4 are controlled by a Brinks mist eliminator before exhausting through one (1) stack, identified as D031. Sulfur dioxide emissions are controlled in the process by a double absorption system.

This is an affected facility under 40 CFR 60, Subpart H.

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

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

E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR Part 60, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the affected emission units at this source except as otherwise specified in 40 CFR Part 60, Subpart H, Section D.4 of this permit or by Appendix A (Alternative Monitoring Plan for SO2 Emissions).

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.2.2 Standards of Performance for Sulfuric Acid Plants [326 IAC 12-1] [40 CFR Part 60, Subpart H]

Pursuant to 40 CFR Part 60, Subpart H, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart H, which are incorporated by reference as 326 IAC 12 (included as Attachment B to this permit), except when otherwise specified by Section D.4 of this permit or by Appendix A (Alternative Monitoring Plan for SO2 Emissions) for the above listed emission units as specified as follows:

(1) 40 CFR 60.80
(2) 40 CFR 60.81
(3) 40 CFR 60.82

(4) 40 CFR 60.83
(5) 40 CFR 60.84
(6) 40 CFR 60.85

SECTION E.3. EMISSION UNIT OPERATION CONDITIONS

Specifically Regulated Insignificant Activities

(d) Two (2) Emergency compression ignition generators less than 500 HP, ordered in 2000 and 2004. This is an affected facility under 40 CFR Part 63, Subpart ZZZZ.

(e) One (1) fire pump compression ignition RICE engine less than 500 HP. This is an affected facility under 40 CFR Part 63, Subpart ZZZZ**.**

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.3.1 General Provisions Relating to National Emissions Standard for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.6590, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the above listed emission units, as specified in Appendix A of 40 CFR Part 63, Subpart ZZZZ, in accordance with the schedule in 40 CFR 63 Subpart ZZZZ, in accordance with schedule in 40 CFR Part 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.3.2 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to 40 CFR 63.6595, the Permittee shall comply with the provisions of 40 CFR 63, Subpart ZZZZ, which are included and incorporated by reference as 326 IAC 20-82 (included as Attachment C to this permit), for the above listed emissions units, as specified as follows:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(3), (f), (h), and (i)

(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), and (f)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 4)
(18) Table 6 (item 9)
(19) Table 8

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

Source Name: Eco Services Operations LLC
Source Address: 2000 Michigan Street, Hammond, Indiana 46320
Part 70 Permit No.: 089-33025-00242

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

PART 70 OPERATING PERMIT

EMERGENCY OCCURRENCE REPORT

Source Name: Eco Services Operations LLC
Source Address: 2000 Michigan Street, Hammond, Indiana 46320
Part 70 Permit No.: 089-33025-00242

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

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

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

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

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

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

Source Name: Eco Services Operations LLC
Source Address: 2000 Michigan Street, Hammond, Indiana 46320
Part 70 Permit No.: 089-33025-00242

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

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attachment A

Part 70 Operating Permit No: 089-33025-00242

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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]

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either 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 but less than 76.6 kPa or with a design capacity greater than or equal to 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 but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all

times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m^3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in § 60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”).

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.

(a) After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet § 60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of § 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator

shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, § 60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in § 60.112b, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in § 60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with § 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(1) and § 60.113b(a)(1). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Keep a record of each inspection performed as required by § 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in § 60.113b(a)(2) are detected during the annual visual inspection required by § 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by § 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in § 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of § 61.112b(a)(1) or § 60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with § 61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(2) and § 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by § 60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by § 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by § 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with § 60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by § 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under § 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 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 m^3 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 m^3 but less than 151 m^3 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 m^3 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 m^3 but less than 151 m^3 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 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.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 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]

Attachment B

Part 70 Operating Permit No: 089-33025-00242

[Downloaded from the eCFR on December 3, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart H—Standards of Performance for Sulfuric Acid Plants

§60.80 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to each sulfuric acid production unit, which is the affected facility.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

§60.81 Definitions.

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

(a) *Sulfuric acid production unit* means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans, or acid sludge, but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

(b) *Acid mist* means sulfuric acid mist, as measured by Method 8 of appendix A to this part or an equivalent or alternative method.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 20794, June 14, 1974]

§60.82 Standard for sulfur dioxide.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H_2SO_4.

[39 FR 20794, June 14, 1974]

§60.83 Standard for acid mist.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain acid mist, expressed as H_2SO_4, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H_2SO_4.

(2) Exhibit 10 percent opacity, or greater.

[39 FR 20794, June 14, 1974, as amended at 40 FR 46258, Oct. 6, 1975]

§60.84 Emission monitoring.

(a) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under §60.13(d), shall be sulfur dioxide (SO_2). Method 8 shall be used for conducting monitoring system performance evaluations under §60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.

(b) The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each eight-hour period as follows:

$$CF=k[(1.000-0.015r)/(r-s)]$$

where:

CF=conversion factor (kg/metric ton per ppm, lb/ton per ppm).

k=constant derived from material balance. For determining CF in metric units, k=0.0653. For determining CF in English units, k=0.1306.

r=percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Administrator's approval.

s=percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under paragraph (a) of this section.

(c) The owner or operator shall record all conversion factors and values under paragraph (b) of this section from which they were computed (i.e., CF, r, and s).

(d) Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO_2 emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO_2, O_2, and CO_2 (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO_2 monitor shall be as specified in paragraph (b) of this section. The span value for CO_2 (if required) shall be 10 percent and for O_2 shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO_2 emission rate as follows:

$$E_s = (C_s\ S)/[0.265 - (0.0126\ \%O_2) - (A\ \%CO_2)]$$

where:

E_s = emission rate of SO_2, kg/metric ton (lb/ton) of 100 percent of H_2SO_4 produced.

C_s = concentration of SO_2, kg/dscm (lb/dscf).

S = acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H_2SO_4 produced.

$\%O_2$ = oxygen concentration, percent dry basis.

A = auxiliary fuel factor,

= 0.00 for no fuel.

= 0.0226 for methane.

= 0.0217 for natural gas.

= 0.0196 for propane.

= 0.0172 for No 2 oil.

= 0.0161 for No 6 oil.

= 0.0148 for coal.

= 0.0126 for coke.

$\%CO_2$ = carbon dioxide concentration, percent dry basis.

NOTE: It is necessary in some cases to convert measured concentration units to other units for these calculations:

Use the following table for such conversions:

From—	**To—**	**Multiply by—**
g/scm	kg/scm	10^{-3}
mg/scm	kg/scm	10^{-6}
ppm (SO_2)	kg/scm	2.660×10^{-6}
ppm (SO_2)	lb/scf	1.660×10^{-7}

(e) For the purpose of reports under §60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under §60.82.

[39 FR 20794, June 14, 1974, as amended at 40 FR 46258, Oct. 6, 1975; 48 FR 23611, May 25, 1983; 48 FR 4700, Sept. 29, 1983; 48 FR 48669, Oct. 20, 1983; 54 FR 6666, Feb. 14, 1989; 65 FR 61753, Oct. 17, 2000; 79 FR 11250, Feb. 27, 2014]

§60.85 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the SO_2 acid mist, and visible emission standards in §§60.82 and 60.83 as follows:

(1) The emission rate (E) of acid mist or SO_2 shall be computed for each run using the following equation:

$E = (CQ_{sd}) / (PK)$

where:

E = emission rate of acid mist or SO_2 kg/metric ton (lb/ton) of 100 percent H_2SO_4 produced.

C = concentration of acid mist or SO_2, g/dscm (lb/dscf).

Q_{sd} = volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P = production rate of 100 percent H_2SO_4, metric ton/hr (ton/hr).

K = conversion factor, 1000 g/kg (1.0 lb/lb).

(2) Method 8 shall be used to determine the acid mist and SO_2 concentrations (C's) and the volumetric flow rate (Q_{sd}) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

(3) Suitable methods shall be used to determine the production rate (P) of 100 percent H_2SO_4 for each run. Material balance over the production system shall be used to confirm the production rate.

(4) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

(i) The integrated technique of Method 3 is used to determine the O_2 concentration and, if required, CO_2 concentration.

(ii) The SO_2 or acid mist emission rate is calculated as described in §60.84(d), substituting the acid mist concentration for C_s as appropriate.

[54 FR 6666, Feb. 14, 1989]

Attachment C

Part 70 Operating Permit No: 089-33025-00242

[Downloaded from the eCFR on July 23, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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

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

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

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

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

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

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

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

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

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

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

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

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

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

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

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

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

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

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

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

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

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

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

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

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

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

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

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

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6615 When must I conduct subsequent performance tests?

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

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

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

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

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

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

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

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

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

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

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

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

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

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

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

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_O} \quad (Eq. 3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

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

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR

part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

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

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

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

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

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

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

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

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

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

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

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

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

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

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

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

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

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

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

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

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

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

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

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

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

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

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

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

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

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

(1) Company name and address.

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

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

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

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

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

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

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

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

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

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

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

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

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

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

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

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

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

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

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

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

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

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

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

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

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

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

site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

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

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

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

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§63.6675 What definitions apply to this subpart?

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

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

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

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

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

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

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

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

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

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

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

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

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

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

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

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

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

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

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

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

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

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

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

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

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

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

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

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

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

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

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

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

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

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

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

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

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

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

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

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

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

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

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

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

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

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

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

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

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

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

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

Subpart means 40 CFR part 63, subpart ZZZZ.

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

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

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

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

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

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

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

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

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

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

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2.	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

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

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

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]

For each . . .	Complying with the requirement to . . .	You must . . .
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

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

[78 FR 6711, Jan. 30, 2013]

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

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

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

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		ii. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary)	(b) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formalde-hyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentra-tion of formalde-hyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the station-ary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iv. Measure formalde-hyde at the exhaust of the station-ary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the station-ary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

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

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

[79 FR 11290, Feb. 27, 2014]

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

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and

		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and

		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.

10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

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

[78 FR 6715, Jan. 30, 2013]

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

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

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
		c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in §63.6650(b)(1)-(5).

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

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

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

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two

consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) “ICAC Test Protocol for Periodic Monitoring”, EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) “Code of Federal Regulations”, Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility_____ Engine I.D._____ Date_____											
Run Type:	(_)			(_)			(_)			(_)	
(X)	Pre-Sample Calibration			Stack Gas Sample			Post-Sample Cal. Check			Repeatability Check	
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
″											
″											
″											
″											

Measurement Data Phase											
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Mean											
Refresh Phase											
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[78 FR 6721, Jan. 30, 2013]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Significant Source Modification and Significant Permit Modification

Source Background and Description

Source Name:	**Eco Services Operations LLC**
Source Location:	**2000 Michigan Street, Hammond, IN 46320**
County:	**Lake (North Township)**
SIC Code:	**2819**
Operation Permit No.:	**T089-33025-00242**
Operation Permit Issuance Date:	**May 30, 2014**
Significant Source Modification No.:	**089-35105-00242**
Significant Permit Modification No.:	**089-35209-00242**
Permit Reviewer:	**Deena Patton**

On January 5, 2015, the Office of Air Quality (OAQ) had a notice published in the Post Tribune, Merrillville, Indiana, stating that Eco Services Operations LLC had applied for a Significant Source Modification and Significant Permit Modification to change the source name, to add the consent decree information to the source modification prior to termination and to correct several errors in their Title V Renewal Permit. The notice also stated that the OAQ proposed to issue a Significant Source Modification and Significant Permit Modification 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 February 4, 2015, Julie Sheffield submitted comments to IDEM, OAQ on the draft significant source modification and significant permit modification.

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

Comment 1:

> In regards to the calculations, the Unit #4 SARU sheet is labeled wrong. It should say Unit #4 SARU not, Alternative Fuel Storage and Direct Burn.

Response to Comment 1:

> IDEM agrees with the recommended changes, since the calculation sheet should correctly identify the emission unit. The permit has been revised as requested above.

Comment 2:

> In regards to the Significant Source Modification cover letter, the cooling towers description is inaccurate. It should read "Two (2) cell forced draft non-contact cooling tower system (4 fans),

with a capacity of 16,000 gallons per minute, not regulated under a NESHAP."

Response to Comment 2:

IDEM agrees with the recommended changes, since the emission unit description needs to correctly identify the emission unit. The permit has been revised as requested above.

(b) **Two (2)** ~~Four (4)~~ **cell ~~F~~forced** draft non-contact cooling tower system **(4 fans)**, with a capacity of 16,000 gallons per minute, not regulated under a NESHAP.

Comment 3:

In regards to the permit, on page 7 item (f), the emission unit description for the four (4) raw material storage tanks (72 through 75), the language "Some atmospheric venting of tank trucks occurs (during open dome sampling, for example)"; should be moved farther down in the description for clarity. This change also needs to apply to the technical support document (TSD).

Response to Comment 3:

The Permit will have the updated changes. The permit has been revised as follows:

(f) Four (4) raw material storage tanks identified as tank Nos. 72, 73, 74, and 75, with capacities of 8,000 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. All four tanks were constructed in 1985. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. ~~Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example).~~ Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, Eco Services Operations LLC will not vent railcars simultaneously. **Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example).** The company considers these to be insignificant activities.

Comment 4:

In regards to the emission unit description for the two (2) emergency compression ignition generators less than 500 HP (item d under A.3); one of the emergency generators was ordered in 2000 and not in 2004.

Response to Comment 4:

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

(d) Two (2) Emergency compression ignition generators less than 500 HP, ordered in **2000 and** 2004. (This is an affected facility under 40 CFR Part 63, Subpart ZZZZ)

Comment 5:

In regards to Condition C.5, Fugitive Particulate Matter Emissions [326 IAC 6.8-10-3], Eco

Services would like C.5 removed or for the TSD to clearly say it does not apply.

Response to Comment 5:

IDEM agrees that the Condition C.5 does not apply to the source since the source does not have potential fugitive particulate emissions greater than five (5) tons per year, however, the condition will remain in the permit in case the rule does apply in the future.

Comment 6:

In regards to the permit, there are several typographical corrections. On page 35, D.1.3 should say "emission factor" not "mission factor". On page 36, the emission unit description for the Unit 4 Preheater should say "long shutdown" not "ong shutdown". On page 44, E.2.1(a) should say "Alternative Monitoring Plan" not "Plant".

Response to Comment 6:

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

D.1.3 PM10 Continuous Compliance [326 IAC 6.8-8]

Pursuant to the source's continuous compliance plan, continuous compliance with the PM10 emission limitation shall be demonstrated by measuring the volume of natural gas fired in the package boiler on an hourly basis and multiplying that volume by the corresponding AP-42 **e**mission factor. The equation used to calculate PM10 emissions is as follows:

****

Unit 4 Preheater

Emission Unit Description

(b) One (1) natural gas fired furnace, identified as the Unit 4 Preheater, constructed in 1962, rated at forty-two (42) MMBtu per hour, exhausting at one (1) stack, identified as D021. The Unit 4 Preheater is used to heat-up the back half of Unit 4 following a **l**ong shutdown.

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

***

E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR Part 60, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the affected emission units at this source except as otherwise specified in 40 CFR Part 60, Subpart H, Section D.4 of this permit or by Appendix A (Alternative Monitoring Plan~~t~~ for SO2 Emissions).

Comment 7:

In regards to the TSD, the source would like if the regulatory applicability was complete for all sources of the permit and not just for the modification. The Federal regulations seem to be complete list of the applicable regulations, although the introduction section states that it is for the modification only). For the state regulations, it only addresses the "modification". The source finds this very confusing.

Response to Comment 7:

The Permit has the updated changes and rules that the source is subject to. No changes were made to the technical support document (TSD) as a result of this comment.

Comment 8:

"Under section 'Existing Approvals', Eco Services requests clarification that construction progress on the modifications authorized in the September 30, 2008 significant source mod is still allowed.'

Response to Comment 8:

Though there is no timeline for the source to start construction, if the company does not start construction within a reasonable time frame, IDEM can revoke the permit. The Permittee shall submit a review request citing reasons for not starting construction to evaluate if an extension of the construction approval in the September 30, 2008 significant source modification is warranted. No changes were made to the technical support document (TSD) as a result of this comment.

Comment 9:

"Page 4 [of the TSD] shows a table of 'project emissions'. Per the emission calculations, the cooling tower PTE is >10 PM and 0 tpy VOC. The table shows 0 tpy PM emissions and '<1' for VOC. However, more importantly, the cooling tower emissions should not be considered a project increase. The cooling towers were previously permitted and were removed in error."

Response to Comment 9:

The new table shown below replaces the TSD table. IDEM agrees with the source that the emissions from the propane space heaters and the cooling towers should not affect the permit level determination, since the emission units were already at the source and were inadvertently removed by OAQ during the Title V Renewal process. This does not change the fact that a significant source modification/significant permit modification was needed because of the Federal Court Consent Decree language.

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	~~<5~~ **0**
PM_{10}	~~<5~~ **0**
$PM_{2.5}$	~~<5~~ **0**
SO_2	~~<10~~ **0**
VOC	~~<10~~ **0**
CO	~~<25~~ **0**
NO_X	~~<10~~ **0**
Single HAPs	~~<10~~ **0**
Total HAPs	~~<25~~ **0**

Comment 10:

"Please remove reference to Subpart Cd on page 24 [of the TSD]."

Response to Comment 10:

The Permit does not contain this reference to Subpart Cd. No changes were made to the as a result of this comment.

Comment 11:

"Should the cover page of the Permit Mod have the new issue date instead of May 30, 2014?"

Response to Comment 11:

The permit modification cover page illustrates when the original operating permit, or in this case the Title V Renewal permit was issued and then another box indicates when the modification to that operating permit is issued. Any modification that occurs during that permit term is listed below the original issuance date. No changes were made to the as a result of this comment.

IDEM Contact

(a) Questions regarding this proposed significant source modification and significant permit revision can be directed to Deena Patton 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) 234-5400 or toll free at 1-800-451-6027 extension 4-5400.

(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 Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Potential to Emit Summary

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

	Uncontrolled Potential To Emit of the Entire Source (tons/year)										
Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP (rate)	Worst Single HAP (pollutant)
Package Boiler	0.77	3.08	3.08	0.24	40.49	2.23	34.01	48,365	0.76	0.73	Hexane
Unit #4 Preheater	0.34	1.37	1.37	0.11	18.04	0.99	15.15	21,541	0.34	0.32	Hexane
Unit #4 SARU	562.07	562.07	562.07	10219	43.43	7.66	9.53	334,295	1622.55	1619.37	HCl
Spent Acid Storage Tanks	0.00	0.00	0.00	0.31	0.00	210.02	0.00	0	22.80	1.43	HCl
Alternative Fuel Storage	0.00	0.00	0.00	0.00	2.28	4.70	12.41	0	16.95	0.21	HCl
John Zink Furnace	0.42	1.66	1.66	0.13	21.90	1.20	18.40	26,157	0.41	0.39	Hexane
Cooling Tower	11.60	8.79	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Molten Sulfur Storage tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive Emissions	0.00	0.00	0.00	0.00	0.00	10.42	0.00	0.00	2.45	0.00	
Total	575.20	576.98	579.78	10220.21	126.14	237.23	89.50	**430,358**	1666.27	1621.01	HCl

	Limited Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)										
Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP (rate)	Worst Single HAP (pollutant)
Package Boiler	0.77	3.08	3.08	0.24	40.49	2.23	34.01	48,365	0.76	0.73	Hexane
Unit #4 Preheater	0.34	1.37	1.37	0.11	18.04	0.99	15.15	21,541	0.34	0.32	Hexane
Unit #4 SARU	71.38	71.38	71.38	3577	43.43	7.66	9.53	334,295	11.28	8.10	HCl
Spent Acid Storage Tanks	0.00	0.00	0.00	0.0031	0.00	10.50	0.00	0	2.83	1.43	HCl
Alternative Fuel Storage	0.00	0.00	0.00	0.00	2.28	4.70	12.41	0	1.07	0.21	HCl
John Zink Furnace	0.42	1.66	1.66	0.13	21.90	1.20	12.41	26,157	0.41	0.39	Hexane
Cooling Tower	11.60	8.79	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Molten Sulfur Storage tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive Emissions	0.00	0.00	0.00	0.00	0.00	10.42	0.00	0.00	2.45	0.00	
Total	84.51	86.29	89.10	3577.28	126.14	37.71	83.51	**430,358**	19.15	9.74	HCl

Appendix A: Emissions Calculations
Package Boiler

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Package Boiler**
(natural gas)

STACK ID: D011
STACK (DIAM:HEIGHT): (4:55)
FLOWRATE (ACFM): 10538
Ts(°F): 450

CNTRL DEV: None

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
94.3	1020	809.9

Heat Content (Btu/cft):
QTY Burned(mmcft/yr):

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.8	3.1	3.1	0.2	40.5	2.2	34.0

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).
Company submitting EF's for large Boilers since capacity (94 MMBtu) is close to the cut-off for small Boilers
For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	8.504E-04	4.859E-04	3.037E-02	7.289E-01	1.377E-03	7.620E-01

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.025E-04	4.454E-04	5.669E-04	1.539E-04	8.504E-04	**2.219E-03**
					Total HAPs	**7.642E-01**
					Worst HAP	**7.29E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in kg/MMBtu	53.06	1.00E-03	1.00E-04
Potential Emission in tons/yr	48,315	0.91	0.09
Summed Potential Emissions in tons/yr	48,316		
CO2e Total in tons/yr	48,365		

Methodology
CH4 and N2O emission factors from 40 CFR Part 98, Subpart C, Table C-2.
CO2 Emission Factor from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
AP 42, Table 1.4-2, footnote 'a'; convert lb/MMscf to lb/MMBtu, divide by 1020.
CO2 = 120,000 lb/MMscf; (120,000 lb/MMscf)/(1020) = 117.65 lb/MMBtu;
1 pound = 0.45359237 kilogram
(117.65 lb/MMBtu) * (0.45359237 kg/ 1 lb) = 53 kg/MMBtu
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Unit #4 Preheater

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Unit #4 Preheater**
(natural gas)

CNTRL DEV: None

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
42.0	1020	360.7

STACK ID: D021
STACK (DIAM:HEIGHT): (4:35)
FLOWRATE (ACFM): 49000
Ts(°F): 850

Heat Content (Btu/cft): 1050
QTY Burned(mmcft/yr): 4

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.3	1.4	1.4	0.1	18.0	1.0	15.1

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).
Company submitting EF's for large Boilers since capacity (94 MMBtu) is close to the cut-off for small Boilers
For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	3.787E-04	2.164E-04	1.353E-02	3.246E-01	6.132E-04	3.394E-01

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	9.018E-05	1.984E-04	2.525E-04	6.853E-05	3.787E-04	**9.883E-04**
					Total HAPs	**3.404E-01**
					Worst HAP	**3.25E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in kg/MMBtu	53.06	1.00E-03	1.00E-04
Potential Emission in tons/yr	21,519	0.41	0.04
Summed Potential Emissions in tons/yr	21,519		
CO2e Total in tons/yr	21,541		

Methodology
CH4 and N2O emission factors from 40 CFR Part 98, Subpart C, Table C-2.
CO2 Emission Factor from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
AP 42, Table 1.4-2, footnote 'a'; convert lb/MMscf to lb/MMBtu, divide by 1020.
CO2 = 120,000 lb/MMscf; (120,000 lb/MMscf)/(1020) = 117.65 lb/MMBtu;
1 pound = 0.45359237 kilogram
(117.65 lb/MMBtu) * (0.45359237 kg/ 1 lb) = 53 kg/MMBtu
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
John Zink Furnace

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID:	**John Zink Furnace**	STACK ID:	D031
	(natural gas)	STACK (DIAM:HEIGHT):	(6:300)
		FLOWRATE (ACFM):	51000
CNTRL DEV:	None	Ts(°F):	180

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr		
			Heat Content (Btu/cft):	1050
			QTY Burned(mmcft/yr):	15
51.0	1020	438.0		

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.4	1.7	1.7	0.1	21.9	1.2	18.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).
Company submitting EF's for large Boilers since capacity (94 MMBtu) is close to the cut-off for small Boilers
For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	4.599E-04	2.6E-04	1.6E-02	3.942E-01	7.446E-04	4.121E-01

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.095E-04	2.409E-04	3.066E-04	8.322E-05	4.599E-04	**1.200E-03**

Total HAPs	**0.41**
Worst HAP	**0.39**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in kg/MMBtu	53.06	1.00E-03	1.00E-04
Potential Emission in tons/yr	26,130	0.49	0.05
Summed Potential Emissions in tons/yr	26,131		
CO2e Total in tons/yr	26,157		

Methodology
CH4 and N2O emission factors from 40 CFR Part 98, Subpart C, Table C-2.
CO2 Emission Factor from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
AP 42, Table 1.4-2, footnote 'a'; convert lb/MMscf to lb/MMBtu, divide by 1020.
CO2 = 120,000 lb/MMscf; (120,000 lb/MMscf)/(1020) = 117.65 lb/MMBtu;
1 pound = 0.45359237 kilogram
(117.65 lb/MMBtu) * (0.45359237 kg/ 1 lb) = 53 kg/MMBtu
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25)
+ N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Spent Acid Storage Tanks

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

	STACK ID:	D031	D041
	STACK (DIAM:HEIGHT):	(6:300)	(6:50)
Time Vented to Scrubber (hrs/yr): 849	FLOWRATE (ACFM):	51000	4143
CNTRL DEV: Unit 4 Furnace (Primary), Caustic Scrubber/Vapor Combustor (Backup)	Ts(°F):	180	350

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(lbs/hr)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.00	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM10	0.00	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM2.5	0.00	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
SOx	0.07	99	0.07	1.68	0.31	0.0007	0.0031	N/A	0.00	0.00
NOx	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00
VOC	47.95	95	47.95	1150.80	210.02	2.3975	10.5011	N/A	2.40	10.50
CO	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00
HCl	0.33	0	0.33	7.82	1.43	0.3260	1.4279	N/A	0.33	1.43
CL2	0.08	0	0.08	1.92	0.35	0.0800	0.3504	N/A	0.08	0.35
VOC HAPs	4.80	95	4.80	115.20	21.02	0.2400	1.0512	N/A	0.24	1.05
Total HAPs	--	--	5.21	124.94	**22.80**	0.6460	**2.8295**	N/A	0.65	2.83
LEAD	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00

Enter the time (in hours) the spent acid tanks were vented to the caustic scrubber. This should roughly equal the Unit #4 down time.

From Source:

EF for VOC HAPs is assumed to be 1/10 of the VOC EF value; assumption made by Solvay (Eco Services Operations LLC) and is based on organic HAP content in the VOC.

Total HAPs is sum of VOC HAPs, HCl, and Cl2.

PTE of VOC HAP is controlled by 95%; whereas, the PTE of HCl and Cl2 is not controlled.

Appendix A: Emissions Calculations
Unit #4 SARU

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Unit #4 SARU** (sulfur & spent acid) MDR (tons/hr): 58.33 Yearly Prod. (tons/yr): 307218 CNTRL DEV: Brinks Mist Eliminator

STACK ID: D031
STACK (DIAM:HEIGHT): (6:300)
FLOWRATE (ACFM): 51000
Ts(°F): 180

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/ton)	CE (%)	POTENTIAL EMISSIONS BEFORE CONTROLS (lbs/hr)	BEFORE CONTROLS (lbs/day)	BEFORE CONTROLS (TPY)	AFTER CONTROLS (lbs/hr)	AFTER CONTROLS (TPY)	(gr/dscf)	Potential to Emit After Issuance (lbs/hr)	Potential to Emit After Issuance (TPY)
PM	2.2000	87.3	128.33	3079.82	562.07	16.30	71.38	0.0450	8.75	38.32
PM10	2.2000	87.3	128.33	3079.82	562.07	16.30	71.38	0.0450	8.75	38.32
PM2.5	2.2000	87.3	128.33	3079.82	562.07	16.30	71.38	0.0450	8.75	38.32
SOx	40.0000	65	2333.20	55996.80	10219	816.62	3576.80	N/A	782.00	638.71
NOx	0.1700	0	9.92	237.99	43.43	9.92	43.43	N/A	9.92	43.43
VOC	0.0300	0	1.75	42.00	7.66	1.75	7.66	N/A	1.75	7.66
CO	0.0373	0	2.18	52.22	9.53	2.18	9.53	N/A	2.18	9.53
LEAD	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00

Emission factors from AP-42.
PM10 emissions factor from Table 8-10-2 for spent acid feed. Control efficiency = (2.2-.28)/2.2*100= 87.3%
SO2 emissions factor from Table 8.10-1 @ 97% conversion. 99% conversion for double absorption = 14 lbs/ton. CE = (40-14)/40 * 100 = 65%
Nox emission factor from July 2007 stack test
For Yearly Prod. enter the tons of 100% Sulfuric Acid produced in the given year.

PM10: 326 IAC 6.8-2-30 - 0.150 lbs/ton H2SO4
SO2: 326 IAC 7-4.1-15 - 782 lbs/hr
SO2: CD 2:07CV134WL - 2.5 lbs/ton

Capacity (TPD of acid produced)	1400	TPD
nonhaz max feed rate	40,000	TPY
assumed % VOCs in nonhaz feeds, annual average	100%	
assumed % HAPs in nonhaz feeds, annual average	60%	
spent acid annual max feed rate:		
spent acid feed rate at former 1100 TPD capacity	900	tpd
spent acid feed rate at 1400 TPD capacity (scale up, and assume up to 366 days/yr)	419,236	TPY
assumed % VOCs in spent acid, annual average	10%	
assumed % HAPs in spent acid, annual average (assume 10% of the VOCs are HAP by weight)	1%	
Maximum Natural Gas Burned (this is not maximum heat input of furnace)	125	MMBTU/hr

Pollutant	Pre-Control TPY	Post-Control TPY	Calculations	/ Notes
Acid Mist / PM / PM10 / PM 2.5	562.10	38.33	0.15	lbs of mist allowed per tons of acid produced, long-term
			2.20	lbs of mist per tons of acid produced, pre-control, assumed
			1400	tons/day max acid production
SO2	10220.00	638.75	2.5	lbs of SO2 allowed per tons of acid produced, long-term
			40.0	lbs of SO2 per tons of acid produced, pre-control, assumed
			1400	tons/day max acid production
NOx	53.61	53.61	0.16785	lbs of NOx per tons of acid produced, 2007 stack test
			1.25	safety scale up factor for test data
			0.20981	lbs of NOx per tons of acid produced, site-specific factor
			1400	tons/day max acid production
VOC	7.67	7.67	0.03	lbs of VOC per tons of acid produced, site-specific factor
			1400	tons/day max acid production
CO	10.13	10.13	0.031727	lbs of CO per tons of acid produced, 2007 stack test
			1.25	safety scale up factor for test data
			0.039660	lbs of CO per tons of acid produced, site-specific factor
			1400	tons/day max acid production
HCl	1619.37	8.097	1,575	tpy max chlorides to furnace
			1.028	lbs of HCl generated per lbs of chlorides
			99.5%	HCl DRE from 1996 Trial Burn
Cl2	3.044	3.044	0.376	lbs Cl per lb HCl in stack (avg of 2000 tests)
			0.0%	Cl2 DRE assumed
VOC HAPs	0.141	0.141	40,000	tpy nonhaz feeds
			60%	HAPs in nonhaz feeds
			419,236	tpy spent acid
			1%	HAPs in spent
			99.9995%	destruction of liquid feeds
Total HAPs	**1622.551**	**11.282**		
CO2e - Allocated to Unit 4 SARU (from natural gas burned)	**64,111**	**64,111**	CO2e from Natural Gas:	
			125	max. Natural Gas Burned (this is not maximum heat input of furnace)
			1,095,000	max MMBTU/yr from natural gas
			53.06	kg CO2 emitted per MMBTU natural gas
			0.001	kg CH4 emitted per MMBTU natural gas
			0.0001	kg N2O emitted per MMBTU natural gas
			1	CO2 global warming potential
			25	CH4 global warming potential
			298	N2O global warming potential
			64,044	tpy CO2 from natural gas
			1.2	tpy CH4 from natural gas
			0.1	tpy N2O from natural gas
			64,111	tpy CO2e from natural gas
CO2e - Allocated to spent tanks	138,264	138,264	CO2e from spent acid	
			419,236	spent acid max feed rate, TPY
			10%	assumed % VOCs in spent acid, annual average
			41,924	tpy VOCs/organic in spent, assumed
			90%	assumed weight % carbon in the VOCs
			100%	assumed %conversion to CO2
			3.664	weight ratio CO2/Carbon
			138,264	tpy CO2 from spent acid feeds
			138,264	tpy CO2e from spent acid feeds
CO2e - Allocated to nonhaz tanks	131,920	131,920	CO2e from nonhaz feeds	
			40,000	nonhaz max feed rate, TPY
			100%	assumed % VOCs in nonhaz feeds, annual average
			40,000	tpy VOCs/organic in nonhaz feeds, assumed
			90%	assumed weight % carbon in the VOCs
			100%	assumed %conversion to CO2
			3.664	weight ratio CO2/Carbon
			131,920	tpy CO2 from nonhaz feeds
			131,920	tpy CO2e from nonhaz feeds
Total CO2e	**334,295**	**334,295**	**334,295**	

Appendix A: Emissions Calculations
Alternative Fuel Storage and Direct Burn

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

			Primary	Backup
MDR (mmcft/hr):	0.007293	STACK ID:	D031	D041
Yearly Average Flow(mmcft/hr):	0.000067	STACK (DIAM:HEIGH	(6:300)	(6:50)
Time Vented to Flare (hrs/yr):	8760	FLOWRATE (ACFM):	51000	4143
CNTRL DEV: Unit 4 Furnace (Primary), Vapor Combustor (Backup)		Ts(°F):	180	350
PERMITTED OPERATING HRS:	8760 hr/yr			

POLLUTANT	EF(lbs/mmcft)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM10	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM2.5	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
SOx	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00
NOx	71.4000	0	0.52	12.50	2.28	0.5207	2.2808	N/A	0.52	2.28
VOC	147.0000	0	1.07	25.73	4.70	1.0721	4.6957	N/A	1.07	4.70
HCl*	0.0489	0	0.05	1.17	0.21	0.0489	0.2142	N/A	0.05	0.21
Cl2*	0.0050	0	0.01	0.12	0.02	0.0050	0.0219	N/A	0.01	0.02
CO	388.4000	0	2.83	67.98	12.41	2.8326	12.4068	N/A	2.83	12.41
VOC HAPs	3.8160	95	3.82	91.58	16.71	0.1908	0.8357	N/A	0.19	0.84
Total HAPs			3.87	92.88	**16.95**	0.2447	1.0718	N/A	0.24	1.07

From Source:

AP-42 emission factors for flares: NOx = 0.0680 lbs/mmBtu VOC = 0.140 lbs/mmBtu CO = 0.37 lbs/mmBtu
Emission factors based on a fuel gas with a heat content of 1050 Btu/cft. *HCl, Cl2, and HAPs emission factors are lbs/hr.
Emission factors for all but HCl Cl2 and HAPs are based on the flare (not the tank), therefore, the control efficiencies are zero.
Enter the time (in hours) the hazardous waste storage tanks were vented to the flare. This should roughly equal the Unit #4 down time.

Total HAPs is sum of VOC HAPs, HCl, and Cl2.
VOC HAPs are organic HAPs, and not inorganic HCl and Cl2 HAP emissions.

Appendix A: Emissions Calculations
Cooling Tower

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: Cooling Tower

STACK ID:
MDR (gpm): 20364
STACK (DIAM:HEIGH n/a
FLOWRATE (ACFM):
Average Circulation Rate: 20364
CNTRL DEV: None
Ts(°F):
(gpm)

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.00013	0	2.65	63.57	11.60	2.65	11.60	N/A	2.65	11.60
PM10	0.00010	0	2.01	48.19	8.79	2.01	8.79	N/A	2.01	8.79
PM2.5	0.00013	0	2.65	63.57	0.00	2.65	11.60	N/A	2.65	11.60
SOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
NOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
VOC	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
CO	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
LEAD	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00

PM emission factor = $\frac{10.84 \text{ lbs solids}}{\text{Mgal}} \times \frac{1 \text{ Mgal}}{1000 \text{ gal}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{0.02}{100}$ drift factor = 0.0001301 $\frac{\text{lbs solids/hr}}{\text{gpm water}}$

PM10 emission factor = (PM emission factor)x0.758

Enter the average cooling water circulation rate for the given year.

Appendix A: Emissions Calculations
Molten Sulfur Storage Tank

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

CALCULATIONS BY: Thomas J. Nyhan NO. OF POINTS: 10

NOTES
EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY
MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY
Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

POINT ID: **Molten Sulfur Storage Tank**

STACK ID:
MDR (T/hr):
STACK (DIAM:HEIGHT):
YEARLY PROD (T/yr): 32,020.29
FLOWRATE (ACFM):
CNTRL DEV: None
Ts(°F):
PERMITTED OPERATING H 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
H2S	0.0017	0	0.2848	6.8352	1.2474	0.2848	1.2474	N/A	0.2848	1.2474
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
PM2.5	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
LEAD	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

Hammond Ordinance No. 3522

H2S Emission Factor = $\frac{\text{0.0017 lbs H2S}}{\text{Ton Sulfur Loaded}}$ + $\frac{\text{0.21 lbs H2S}}{\text{Hour}}$

Emission factors are based on calculations submitted by the company in their permit application.
For Yearly Production enter the weight of molten sulfur received in the given year.
Hydrogen Sulfide Scrubber no longer in use.

Appendix A: Emissions Calculations
Fugitive Emissions

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Fugitive Emissions** STACK ID: n/a
MDR: n/a STACK (DIAM:HEIGHT): n/a
FLOWRATE (ACFM): n/a
CNTRL DEV: None Ts(°F): n/a
PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(lbs/hr)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.00000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
PM10	0.00000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
PM2.5	0.00000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
SOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
VOC	2.38	0	2.38	57.12	10.42	2.38	10.42	N/A	2.38	10.42
HCl	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
Cl2	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
HAPs	0.56	0	0.56	13.44	2.45	0.56	2.45	N/A	0.56	2.45

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Eco Services Operations LLC
Source Location:	2000 Michigan Street, Hammond, IN 46320
County:	Lake (North Township)
SIC Code:	2819
Operation Permit No.:	T 089-33025-00242
Operation Permit Issuance Date:	May 30, 2014
Significant Source Modification No.:	089-35105-00242
Significant Permit Modification No.:	089-35209-00242
Permit Reviewer:	Deena Patton

Existing Approvals

The source was issued Part 70 Operating Permit No. 089-33025-00242 on May 30, 2014. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Lake County (North Township).

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O_3	On June 11, 2012, the U.S. EPA designated Lake County nonattainment, for the 8-hour ozone standard.[12]
$PM_{2.5}$	Unclassifiable or attainment effective February 6, 2012, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]U.S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Lake County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3 for the 1-hour standard.
[2]The department has filed a legal challenge to U.S. EPA's designation in 77 FR 34228.

(a) Ozone Standards

U.S. EPA, in the Federal Register Notice 77 FR 112 dated June 11, 2012, has designated Lake County as nonattainment for ozone. On August 1, 2012, the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective August 9, 2012. IDEM does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against U.S. EPA in the U.S. Court of Appeals for the DC Circuit on July 19, 2012. 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 designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NO_x emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) $PM_{2.5}$
Lake County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a sulfuric acid manufacturing plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	**Emissions** (ton/yr)
PM	84.51
PM_{10}	86.29
$PM_{2.5}$	89.10
SO_2	3577.3
NO_X	126.1
VOC	37.71
CO	83.51
Total HAPs	19.15
Worst Single	9.74 (HCl)

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because nonattainment regulated pollutant NOx is emitted at a rate of 100 tons per year or more.

(c) These emissions are based upon TSD Appendix A of 089-33025-00242.

(d) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) reviewed a modification application, submitted by Eco Services Operation LLC on November 3, 2014, relating to the request to change the source name, the source modification of the consent decree prior to termination, and to correct several errors in their Title V Renewal Permit. The following is a list of the emission units that were inadvertently removed before final issuance:

Insignificant Activities as defined in 326 IAC 2-7-1(21):

(a) Propane or liquefied petroleum gas, or butane-fired space heaters, process heaters, heat treatment furnaces, and/or boilers with heat input equal to or less than six million (6,000,000) Btu per hour, consisting of the following:

(1) One (1) portable propane torpedo heater

(b) Four (4) Forced draft non-contact cooling tower system, with a capacity of 16,000 gallons per minute, not regulated under a NESHAP.

Furthermore, Eco Services Operations, LLC is subject to a Federal Court Consent Decree in United States v. Rhodia Inc., Case No. 2:07-cv-134 WCL (Document No. 24) entered by the court on July 23, 2007 ("Decree"). In paragraph V of the Decree requires Eco Services (formerly Rhodia) to meet a long-term SO_2 emission limit of 2.50 pound per ton of 100% sulfuric acid produced and/or a short-term limit of 3.50 pounds per ton.

EPA recently approved Indiana rule to incorporate terms from Federal Consent Decrees and Federal District Court Orders into construction permits. These changes to 326 IAC 2-7-10.5(b) became effective on February 18, 2014.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	<5
PM_{10}	<5
$PM_{2.5}$	<5
SO_2	<10
VOC	<10
CO	<25
NO_X	<10
Single HAPs	<10
Total HAPs	<25

However, pursuant to 326 IAC 2-7-10.5(b)(2) federal consent decree that is entered into for the purpose of resolving alleged violations is subject to a Significant Source Modification. Pursuant to 326 IAC 2-7-12(d), this modification is considered a Significant Permit Modification because the permit modification involves significant changes to the existing monitoring requirements of the Part 70 Operating Permit.

Permit Level Determination – PSD and Emission Offset

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Project Emissions (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NO_X**	**VOC**	**CO**	**GHGs**
Propane Space Heaters	<1	<1	<1	<1	<4	<1	<3	<4,000
Cooling Towers	0	0	0	0	0	<1	0	0
Total for Modification	<5	<5	<5	<10	<10	<10	<25	<75,000
Significant Thresholds	--	--	--	40	--	--	--	75,000 CO_2e
Emission Offset	--	--	--	--	100	100	--	--

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

(a) On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

(b) This modification to an existing major PSD stationary source is not major because:

(1) The emissions increase of each PSD regulated pollutant, excluding GHGs, are less than the PSD significant levels; and

(2) The emissions increase of GHGs from this modification to an existing major PSD source are less than seventy-five thousand (75,000) tons of CO_2 equivalent (CO_2e) emissions per year.

Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(c) This modification to an existing major Emission Offset stationary source is not major because the emissions increase of NOx and VOC are less than the Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

NSPS:

(a) The one (1) sulfuric acid regeneration unit (Unit 4) is not subject to the New Source Performance Standards for Emissions Guidelines and Compliance Times for Sulfuric Acid Product Units (40 CFR 60.30d, Subpart Cd), since this is not an existing unit,futhermore, the source has a Consent Decree to meet the new requirements.

(b) This source is not subject to the requirements of Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units, 40 CFR 60.40c, Subpart Dc), since the Package Boiler, the Unit 4 Preheater, and the John Zink Furnace were all constructed prior to June 9, 1989.

(c) The one (1) sulfuric acid regenerationg unit (Unit 4) is subject to the New Source Performance Standards for Sulfuric Acid Plants (40 CFR 60.80, Subpart H), which is incorporated by reference as 326 IAC 12. The units subject to this rule include the following:

One (1) sulfuric acid regeneration unit, identified as Unit 4, constructed in 1958, with a maximum acid production rate of 58.33 tons per hour. Raw materials fed to the unit include spent sulfuric acid, molten sulfur, and other sulfur-bearing materials. The unit includes one (1) furnace firing natural gas and non-hazardous alternative fuels. Acid mist emissions from Unit 4 are controlled by a Brinks mist eliminator before exhausting through one (1) stack, identified as D031. Sulfur dioxide emissions are controlled in the process by a double absorption system.

Unit 4 is subject to the following portions of Subpart H.

(1) 40 CFR 60.80
(2) 40 CFR 60.81
(3) 40 CFR 60.82
(4) 40 CFR 60.83
(5) 40 CFR 60.84
(6) 40 CFR 60.85

(d) The five (5) spent acid storage tanks (46, 47, 56, 57, and 58) and the two (2) raw material storage tanks (70 and 71) are subject to the New Source Performance Standards for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60.110b, Subpart Kb), which is incorporated by reference as 326 IAC 12. The units subject to this rule include the following:

Five (5) spent acid storage tanks, identified as tank Nos. 46, 47, 56, 57, and 58. Emissions from these tanks are controlled by the Unit 4 furnace or by the caustic scrubber and vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the caustic scrubber and vapor combustor. The tanks may be vented directly to the atmosphere when they contain only fresh sulfuric acid product. Spent sulfuric acid tank trucks and railcars utilize the same control equipment during unloading activities and will be considered part of this emission unit. Reloading of tank trucks and railcars with fresh acid also results in VOC and sulfur dioxide emissions that are considered part of this emission unit. Emissions from reloading with fresh acid are uncontrolled. Tank specifications are as follows:

(1) Tank 46 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1958.

(2) Tank 47 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1987.

(3) Tank 56 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(4) Tank 57 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(5) Tank 58 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

Two (2) raw material storage tanks, identified as tank Nos. 70 and 71, with capacities of 56,400 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. Tanks 70 and 71 were constructed in 1986 and 1985 respectively. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, Eco Services Operations LLC will not vent railcars simultaneously. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). The company considers these to be insignificant activities.
Nonapplicable portions of the NSPS will not be included in the permit. The seven (7) tanks are subject to the following portions of Subpart Kb.

(1) 40 CFR 60.110b(a)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(3)
(4) 40 CFR 60.113b(c)
(5) 40 CFR 60.115b(c)
(6) 40 CFR 60.116b(a), (b), (e), (f), and (g)

The tanks 72, 73, 74, and 75 are not subject to 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 60.110b, Subpart Kb, since these four (4) tanks each have a capacity less than 75 cubic meters or 19,812 gallons. Each of these four (4) tanks have a maximum capacity of 8,000 gallons.

(e) This source is not subject to the requirements of the New Source Performance Standard for Commercial and Industrial Solid Waste Incineration Units, 40 CFR 60.2000, Subpart CCCC, since this source does not incinerate commercial or industrial solid waste.

(f) This source is not subject to the requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.2000, Subpart CCCC, since this source does not incinerate commercial or industrial solid waste.

(g) The diesel fired emergency generators and fire pump are not subject to the requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.4200, Subpart IIII, since each of these engines were constructed prior to July 11, 2005.

(h) The diesel fired emergency generators and fire pump are not subject to the requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60.4230, Subpart JJJJ, since each of these engines is a compression ignition and not a spark ignition.

(i) There are no other New Source Performance Standards (326 IAC 12, 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

(j) The forced non-contact draft cooling tower system is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial Process Cooling Towers, Subpart Q since this unit does not operate with chromium-based water treatment chemicals and is neither a major source of HAPs or an integral part of a facility that is a major source of HAPs as defined in §63.401.

(l) The two (2) diesel emergency generators and the one (1) diesel emergency fire pump (500 HP, each) are subject the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because they are considered an existing stationary reciprocating internal combustion engine (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP). Construction of the two (2) diesel emergency generators and the one (1) diesel emergency fire pump commenced prior to 2005.

The two (2) diesel emergency generators and the one (1) diesel emergency fire pump are subject the following applicable portions of the NESHAP for existing emergency stationary RICE (construction commenced before June 12, 2006) at an area source of HAP:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(3), (f), (h), and (i)
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), and (f)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 4)
(18) Table 6 (item 9)
(19) Table 8

Note: Existing emergency compression ignition (CI) stationary RICE located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the souce except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

(m) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, Subpart DDDDD (5D), since this source is not a major source of HAPs as defined in §63.7575.

(n) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, Subpart JJJJJJ (6J), since the Package Boiler, Unit 4 Preheater, and the John Zink furnace, are all natural gas fired and pursuant to 40 CFR 63.11195(e), gas fired boilers are not subject to this subpart.

(o) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, Subpart VVVVVV (6V), since the concentrations in Table 1 HAPs in feedstock are below the 0.1/1.0% thresholds and have been since the rule publication date of October 29, 2009. However, because waste fuels are comingled with process fluids in the industrial furnace, Subpart VVVVVV may potentially become applicable in the future if Hammond processes waste fuel containing HAPs above the thresholds. If Subpart VVVVVV does become applicable, Eco Services will comply with the rule upon receipt of the material that contains HAPs above the Table 1 thresholds. If the material is direct burned, the management practices would be the only applicable requirements. if the material is placed in storage, storage requirements would also apply. Listed HAP concentrations are determined by examining MSDS or other data provided by the customer that provides the waste fuel.

(p) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Chemical Preparations Industry, Subpart BBBBBBB (7B), since the source does not have any materials, intermediates, or products that contain one or more of the target HAPs (e.g. chromium VI or III, lead, nickel, manganese) in the concentrations described in § 63.11588.

(q) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

CAM

(r) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification, since each of the new emission units do not have controls, or emission limitations.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 and 2-3 (PSD and Emission Offset)
PSD and Emission Offset applicability is discussed under the Permit Level Determination – PSD and Emission Offset section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of natural gas fired space heaters and propane space heaters will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
Since this source is located in ***Lake*** County, and has a potential to emit NO_X and VOC greater than or equal to twenty-five (25) tons per year, an emission statement covering the previous calendar year must be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance Cerification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

Space Heaters

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8, the natural gas and propane fired space heaters are not subject to the provisions of 326 IAC 6.8, since the potential to emit of particulate matter from the entire source is less than 100 tons per year.

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

Pursuant to 326 IAC 6-2-1, the natural gas and propane fired space heaters are not subject to the provisions of 326 IAC 6-2-4, since these are sources of direct heating.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 1-2-59, the requirements of 326 IAC 6-3-2 are not applicable the natural gas and propane fired space heaters, since liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Cooling Towers

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8, the non-contact cooling towers are not subject to the provisions of 326 IAC 6.8, since the potential to emit of particulate matter is less than 100 tons per year.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the cooling towers are not subject to the provisions of 326 IAC 6-3-2, since the potential particulate emissions are less than five hundred fifty one thousandths (0.551) pound per hour.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
Pursuant to 326 IAC 8-1-6(1), the cooling towers are not subject to the provisions of 326 IAC 8-1-6, since they have potential VOC emissions less than twenty-five (25) tons per year.

John Zink Furnace

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8, the John Zink Furnace is not subject to the provisions of 326 IAC 6.8, since it is not specifically listed in 326 IAC 6.8-2-30 Rhodia Inc., (Note: Eco Services was formerly Rhodia Inc.,) and does not have actual emissions of ten (10) tons or more per year of particulate matter.

326 IAC 6-2 (Particulate Matter Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1, the John Zink Furnace is not subject to the provisions of 326 IAC 6-2-4, since this is a direct heating unit.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 1-2-59, the requirements of 326 IAC 6-3-2 are not applicable the natural gas John Zink Furnace, since liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

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

(a) Sulfuric Acid Regeneration Unit (Unit 4) has applicable compliance determination conditions for 326 IAC 6.8-2-30 as specified below:

Summary of Compliance Monitoring Requirements					
Emission Unit	**Control Device**	**Parameter**	**Frequency**	**Range**	**Excursions and Exceedances**
Sulfuric Acid Regeneration Unit (Unit 4)	Brinks Mist Eliminator	Visible Emission Notations	Daily	Normal - Abnormal	Response Steps

Testing Requirements			
Emission Unit	**Control Device**	**Pollutant**	**Frequency of Testing**
Sulfuric Acid Regeneration Unit (Unit 4)	Brinks Mist Eliminator	Acid Mist	every 5 years

Testing requirement is necessary to show compliance with PM_{10} rule under 326 IAC 6.8-2-30 (Condition D.4.1 in the permit) for the Sulfuric Acid Regeneration Unit (Unit 4) and to meet the requirements of the Consent Decree 2:07CV134 WL.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 089-33025-00242. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

A.2 Emission Units and Pollution Control Equipment Summary
[326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

***

(d) Five (5) spent acid storage tanks, identified as tank Nos. 46, 47, 56, 57, and 58. Emissions from these tanks are controlled by the Unit 4 furnace or by the caustic scrubber and vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the caustic scrubber and vapor combustor. The tanks may be vented directly to the atmosphere when they contain only fresh sulfuric acid product. Spent sulfuric acid tank trucks and railcars utilize the same control equipment during unloading activities and will be considered part of this emission unit. Reloading of tank trucks and railcars with fresh acid also results in VOC and sulfur dioxide emissions that are considered part of this emission unit. Emissions from reloading with fresh acid are uncontrolled. Tank specifications are as follows:

(1) Tank 46 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1958.

(2) Tank 47 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1987.

(3) Tank 56 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(4) Tank 57 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(5) Tank 58 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

These are affected facilities under 40 CFR 60, Subpart Kb.

(e) Two (2) raw material storage tanks, identified as tank Nos. 70 and 71, with capacities of 56,400 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. Tanks 70 and 71 were constructed in 1986 and 1985 respectively. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, ~~Solvay~~ **Eco Services Operations LLC** will not vent railcars simultaneously. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). The company considers these to be insignificant activities.

These are affected facilities under 40 CFR 60, Subpart Kb.

(f) Four (4) raw material storage tanks, identified as tank Nos. 72, 73, 74, and 75, with capacities of 8,000 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. All four tanks were constructed in 1985. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, ~~Solvay~~ **Eco Services Operations LLC** will not vent railcars simultaneously. The company considers these to be insignificant activities.

***

(h) One (1) sulfuric acid regeneration unit, identified as Unit 4, constructed in 1958, with a maximum acid production rate of 58.33 tons per hour. Raw materials fed to the unit include spent sulfuric acid, molten sulfur, and other sulfur-bearing materials. The unit includes one (1) furnace firing natural gas and non-hazardous alternative fuels. Acid mist emissions from Unit 4 are controlled by a Brinks mist eliminator before exhausting through one (1) stack, identified as D031. Sulfur dioxide emissions are controlled in the process by a double absorption system.

This is an affected facility under 40 CFR 60, Subpart H.

~~**Insignificant Activities**~~

~~This stationary source does currently have insignificant activities, as defined in 326 IAC 2-7-1(21) that have applicable requirements.~~

~~(a) Combustion source flame safety purging on startup.~~

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

(c) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 3,500 gallons per day.

(d) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

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

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

(g) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.

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

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

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

(k) Cleaners and solvents characterized as follows:

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

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

(l) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.[6.8]

(m) Closed loop heating and cooling systems.

(n) Cutting 200,000 linear feet or less of one inch (1") plate or equivalent.

(o) Using 80 tons or less of welding consumables.

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

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

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

(s) Heat exchanger cleaning and repair.

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

~~(u) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.~~

~~(v) Paved and unpaved roads and parking lots with public access.~~

~~(w) Asbestos abatement projects regulated by 326 IAC 14-10.~~

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

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

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

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

~~(bb) Two (2) Emergency compression ignition generators less than 500 HP. (40 CFR Part 63, Subpart ZZZZ)~~

~~(cc) One (1) fire pump compression ignition RICE engine less than 500 HP. (40 CFR Part 63, Subpart ZZZZ)~~

~~(dd) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6.8]~~

~~(ee) Purge double block and bleed valves.~~

~~(ff) Filter or coalescer media changeout.~~

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

~~(hh) A laboratory as defined in 326 IAC 2-7-1(21)(g).~~

~~(ii) Non-hazardous truck activities.~~

~~(jj) Catalyst screening with particulate emission control. [326 IAC 6.8]~~

~~(kk) Sand blasting. [326 IAC 6.8]~~

~~(ll) Valves and flanges.~~

~~(mm) Acid filter precoat vent.~~
~~(nn) Emissions associated with washing stack D031~~

~~(oo) Portable containers > 0.46 cubic meters used for the collection, storage or disposal of materials; the containers are closed, except when the material is added or removed.~~

A.3 Specifically Regulated Insignificant Activities
[326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

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

(a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.8-3

(b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6.8]

(c) Asbestos abatement projects regulated by 326 IAC 14-10.

(d) Two (2) Emergency compression ignition generators less than 500 HP. This is an affected facility under 40 CFR Part 63, Subpart ZZZZ.

(e) One (1) fire pump compression ignition RICE engine less than 500 HP. This is an affected facility under 40 CFR Part 63, Subpart ZZZZ.

(f) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6.8]

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

(h) Catalyst screening with particulate emission control. [326 IAC 6.8]

(i) Sand blasting. [326 IAC 6.8]

A.4 Insignificant Activities not Specifically Regulated [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant:

(a) Propane or liquefied petroleum gas, or butane fired space heaters, process heaters, heat treatment furnaces, and/or boilers with heat input equal to or less than six million (6,000,000) Btu per hour.

(1) One (1) portable propane torpedo heater

(b) Combustion source flame safety purging on startup.

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

(d) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 3,500 gallons per day.

(e) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

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

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

(h) Filling drums, pails or other packaging containers with lubricating oils, waxes, and

greases.

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

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

(k) Cleaners and solvents characterized as follows:

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

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

(l) Closed loop heating and cooling systems.

(m) Cutting 200,000 linear feet or less of one inch (1") plate or equivalent.

(n) Using 80 tons or less of welding consumables.

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

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

(q) Forced and induced draft cooling tower system no regulated under a NEHAP.

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

(s) Heat exchanger cleaning and repair.

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

(u) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.

(v) Paved and unpaved roads and parking lots with public access.

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

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

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

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

(aa) Purge double block and bleed valves.

(bb) Filter or coalescer media changeout.

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

(dd) Non-hazardous truck activities.

(ee) Valves and flanges.

(ff) Acid filter precoat vent.

(gg) Emissions associated with washing stack D031

(hh) Portable containers > 0.46 cubic meters used for the collection, storage or disposal of materials; the containers are closed, except when the material is added or removed.

~~A.4~~**A.5** Part 70 Permit Applicability [326 IAC 2-7-2]

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

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

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

***

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS

Package Boiler
Emission Unit Description ~~[326 IAC 2-7-5(14)]:~~ (a) One (1) natural gas fired boiler, **identified as the Package Boiler, constructed in 1980,** rated at ninety-four ~~point~~**and** three**-tenths** (94.3) MMBtu per hour, exhausting at one (1) stack, identified as D011. The ~~p~~**Package** ~~b~~**Boiler** is used to provide supplemental plant steam when Unit #4 is not in operation or is unable to meet the demand. (The information describing the process contained in this emission unit description box is descriptive information and does not constitute enforceable conditions.)

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

***

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

D.1.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.3, the Permittee shall calculate and record (on an hourly basis) the PM10 emission rate from the package boiler, in units of pounds per hour. The Permittee shall also record the quantity of natural gas fired in the package boiler (on an hourly basis) in units of cubic feet per hour.

(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligation with regard to the records required by this condition.

***

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS

Unit 4 Preheater

Emission Unit Description ~~[326 IAC 2-7-5(14)]:~~

(b) One (1) natural gas fired furnace, **identified as the Unit 4 Preheater, constructed in 1962,** rated at forty-two (42) MMBtu per hour, exhausting at one (1) stack, identified as D021. The Unit 4 Preheater is used to heat-up the back half of ~~the sulfuric acid regeneration unit~~ **Unit 4** following a ~~pro~~long~~ed~~ shutdown.

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

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

***

D.2.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.3, the Permittee shall calculate and record (on an hourly basis) the PM10 emission rate from the Unit 4 Preheater, in units of pounds per hour. The Permittee shall also record the quantity of natural gas fired in the Unit 4 Preheater (on an hourly basis), in units of cubic feet per hour.

(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligation with regard to the records required by this condition.

***

SECTION D.3 EMISSION UNIT OPERATION CONDITIONS

Raw Material Storage Tanks 72-75

Emission Unit Description ~~[326 IAC 2-7-5(14)]:~~

(f) Four (4) raw material storage tanks, identified as tank Nos. 72, 73, 74, and 75, with capacities of 8,000 gallons each. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are controlled by the Unit 4 furnace or by the vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. All four tanks were constructed in ~~1986~~**1985**. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, ~~Solvay~~ **Eco Services Operations LLC** will not vent railcars simultaneously. The company considers these to be insignificant activities.

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

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

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

D.3.1 Record Keeping Requirements [326 IAC 8-9-6**(b)**]

(a) The Permittee shall maintain records of the following information for each vessel:

(~~a~~**1**) The vessel identification number.

(~~b~~**2**) The vessel dimensions.

(~~c~~**3**) The vessel capacity.

(b) The Permittee shall maintain these records for the life of each vessel.

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

***

SECTION D.4 EMISSION UNIT OPERATION CONDITIONS

Sulfuric Acid Regeneration Unit (Unit 4)

Emission Unit Description ~~[326 IAC 2-7-5(14)]:~~

(h) One (1) sulfuric acid regeneration unit, identified as Unit 4, constructed in 1958, with a maximum acid production rate of 58.33 tons per hour. Raw materials fed to the unit include spent sulfuric acid, molten sulfur, and other sulfur-bearing materials. The unit includes one (1) furnace firing natural gas and non-hazardous alternative fuels. Acid mist emissions from Unit 4 are controlled by a Brinks mist eliminator before exhausting through one (1) stack, identified as D031. Sulfur dioxide emissions are controlled in the process by a double absorption system.

This is an affected facility under 40 CFR 60, Subpart H.

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

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

***

D.4.2 Sulfur Dioxide (SO2) [326 IAC 7-4.1-15] [Consent Decree 2:07CV134 WL]

(a) Pursuant to 326 IAC 7-4.1-15(a) (Lake County sulfur dioxide emission limitations), the SO2 emissions from Unit 4 shall not exceed seven hundred eighty-two (782) pounds per hour, on a three (3) hour average basis.

(b) Pursuant to **Significant Source Modification 089-35105-00242 and as specified in** Consent Decree 2:07CV134 WL, the SO2 emissions from Unit 4 shall not exceed a long-term limit of two and one half (2.5) pounds per ton of 100% sulfuric acid produced and/or a short-term limit of three and one half (3.5) pounds per ton. These emission limits shall not be relaxed by any future permit action. Compliance with the long-term limit shall be achieved no later than July 1, 2008. Compliance with the long term and short-term limit will be demonstrated using SO2 analyzers at the converter inlet and stack using the procedures in Appendix A (Alternative Monitoring Plan for SO2 Emissions).

The following definitions shall apply for this condition:

(1) “100% sulfuric acid produced” shall mean the stoichiometric quantity of sulfuric acid that would be produced at Unit 4 if all sulfur trioxide (SO3) exiting the converter were used to produce anhydrous sulfuric acid. For purposes of this definition, scrubber byproduct shall be considered to be included in “100% sulfuric acid produced”;

(2) “Long-term limit” shall mean a sulfur dioxide (SO2) emission limit expressed as pounds per ton of 100% sulfuric acid produced, averaged over all Operating Hours in a rolling 365-day period;

(3) "Short-term limit" shall mean the SO2 emission limit expressed as pounds per ton of 100% sulfuric acid produced, averaged over each rolling 3-hour period. The short-term limit shall not apply during periods of Startup, Shutdown and Malfunction;

(4) "Operating hours" shall mean periods during which sulfur or sulfur-bearing compounds, excluding conventional fossil fuels such as natural gas or fuel oils, are being fed to the furnace;

(5) "Startup" shall mean the 24-hour period beginning when the feed of sulfur or sulfur-bearing materials, excluding conventional fossil fuels such as natural gas or fuel oils, to the furnace commences after a main gas blower shutdown;

(6) "Shutdown" shall mean the cessation of operation of Unit 4 for any reason. Shutdown begins at the time sulfur or sulfur-bearing feeds, excluding conventional fossil fuels such as natural gas or fuel oils, to the furnaces ceases; and

(7) "Malfunction" shall mean, consistent with 40 CFR 60.2, any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or process to operate in a normal or usual manner, but shall not include failures that are caused in part by poor maintenance or careless operation.

***

D.4.4 HAPs Minor Limit [40 CFR 63] [326 IAC **20-1**]

The mass of chlorides charged to Unit 4 shall not exceed 1,575 tons per consecutive twelve month period with compliance determined at the end of each month. The emissions of hydrochloric acid (HCl) shall not exceed 10.28 lbs per ton of chlorides charged to Unit 4.

Compliance with the above condition shall limit single HAP emissions from the entire source to less than 10 tons per year **and shall limit the total combined HAP emissions to less than twenty-five (25) tons per year** and will make the source an area source for HAPs.

Compliance Determination Requirements

D.4.5 Testing Requirements ~~[326 IAC 2-6.1-5(a)(2),(4)]~~ [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.4.1 - acid mist emissions, the Permittee shall perform stack testing at the Unit 4 stack, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

***

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

D.4.10 Record Keeping Requirements

(a) To document the compliance status with Condition ~~D.4.2(a)~~**D.4.1**, the Permittee shall calculate and record (on an hourly basis) the acid mist emission rate from Unit 4, in units of pounds per hour.

*****

D.4.1~~0~~**11** Reporting Requirements

(a) Pursuant to 326 IAC 7-4.1-15(b), the Permittee shall submit a report to IDEM, OAQ, and IDEM not later than 30 days after the end of each calendar quarter. The report shall contain the following information:

(1) Three (3) hour average sulfur dioxide emission rate in pounds per hour as measured by the CEMS from Unit 4 for each three (3) hour period during the calendar quarter in which the average emissions exceed the allowable rates specified in Condition D.4.2(a).

(2) The daily average emission rate in units of pounds per ton as determined from CEMS and production data for Unit 4 for each day of the calendar quarter.

(b) Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (35).

***

SECTION E.1 EMISSION UNIT OPERATION CONDITIONS

Spent Sulfuric Acid Storage Tanks(46, 47, 56, 57, and 58) and Raw Material Storage Tanks 70 and 71)

Emission Unit Description ~~[326 IAC 2-7-5(15)]:~~

(d) Five (5) spent acid storage tanks, identified as tank Nos. 46, 47, 56, 57, and 58. Emissions from these tanks are controlled by the Unit 4 furnace or by the caustic scrubber and vapor combustor, should the furnace be unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the caustic scrubber and vapor combustor. The tanks may be vented directly to the atmosphere when they contain only fresh sulfuric acid product. Spent sulfuric acid tank trucks and railcars utilize the same control equipment during unloading activities and will be considered part of this emission unit. Reloading of tank trucks and railcars with fresh acid also results in VOC and sulfur dioxide emissions that are considered part of this emission unit. Emissions from reloading with fresh acid are uncontrolled. Tank specifications are as follows:

(1) Tank 46 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1958.

(2) Tank 47 is a fixed cone roof tank with a maximum capacity of 102,500 gallons. The tank was constructed in 1987.

(3) Tank 56 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(4) Tank 57 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

(5) Tank 58 is a fixed cone roof tank with a maximum capacity of 815,000 gallons. The tank was constructed in 1979.

These are affected facilities under 40 CFR 60, Subpart Kb.

(e) Two (2) raw material storage tanks, identified as tank Nos. 70 and 71, with ~~maximum~~ capacities of 56,400 gallons each**. Raw materials stored consist of nonhazardous alternative fuels and other nonhazardous materials possibly containing volatile organic compounds. Emissions from these tanks are**~~,~~ controlled by **the** Unit 4 furnace or by the vapor combustor, **should the furnace by unavailable. Exhaust to the atmosphere is through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor. Tanks 70 and 71 were** constructed in 1986 and 1985, **respectively. Direct burn tank trucks utilize the same control equipment during unloading activities and will be considered part of this emission unit. Direct burn tank trucks are typically depressurized to the Unit 4 furnace. During periods**

when the Unit 4 furnace is unavailable, direct burn tank trucks may need to be depressurized and emissions routed to the vapor combustor. To ensure the control efficiency of the vapor combustor during these periods, Eco Services Operations LLC will not vent railcars simultaneously. Some atmospheric venting of tank trucks occurs (during open-dome sampling, for example). The company considers these to be insignificant activities. ~~exhausting to the atmosphere through stack D031 when venting to the furnace and through stack D041 when venting to the vapor combustor.~~

These are affected facilities under 40 CFR 60, Subpart Kb.

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

~~E.1.1 General Provisions Relating to NSPS Subpart Kb [326 IAC 12-1] [40 CFR 60, Subpart A]~~

~~Pursuant to 40 CFR Part 60, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the affected emission units at this source, except when otherwise specified in 40 CFR Part 60, Subpart Kb.~~

~~E.1.2 Volatile Organic Liquid Storage Vessels NSPS [40 CFR 60, Subpart Kb] [326 IAC 12]~~

~~The Permittee, which operates the volatile organic liquid storage vessels designated as tank Nos. 46, 47, 56, 57, and 58, and two (2) raw material storage tanks, identified as tank Nos. 70 and 71 shall comply with the following provisions of 40 CFR Part 60, Subpart Kb (included as Appendix A of this permit), which are incorporated by reference as 326 IAC 12:~~

~~40 CFR 60.110b~~
~~40 CFR 60.110b(a)~~

~~40 CFR 60.111b~~
~~40 CFR 60.111b~~

~~40 CFR 60.112b~~
~~40 CFR 60.112b(a)(3)~~

~~40 CFR 60.113b~~
~~40 CFR 60.113b(c)~~

~~40 CFR 60.115b~~
~~40 CFR 60.115b(c)~~

~~40 CFR 60.116b~~
~~40 CFR 60.116b(a)~~
~~40 CFR 60.116b(b)~~
~~40 CFR 60.116b(e)~~
~~40 CFR 60.116b(f)~~
~~40 CFR 60.116b(g)~~

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

E.1.2 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, for the above listed emission units, except as otherwise specified in 40 CFR Part 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.1.2 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 NSPS [326 IAC 12] [40 CFR Part 60, Subpart Kb]

Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Kb, which are incorporated by reference as 326 IAC 12 (included as Attachment A to this permit), for the above listed emissions units as specified as follows:

(1) 40 CFR 60.110b(a)
(2) 40 CFR 60.111b
(3) 40 CFR 60.112b(a)(3)
(4) 40 CFR 60.113b(c)
(5) 40 CFR 60.115b(c)
(6) 40 CFR 60.116b(a), (b), (e), (f), and (g)

***

SECTION E.2. EMISSION UNIT OPERATION CONDITIONS

~~Spent Sulfuric Acid Regeneration Unit (Unit 4)~~

Emission Unit Description ~~[326 IAC 2-7-5(15)]:~~

(h) One (1) sulfuric acid regeneration unit, identified as Unit 4, constructed in 1958, with a maximum acid production rate of 58.33 tons per hour. Raw materials fed to the unit include spent sulfuric acid, molten sulfur, and other sulfur-bearing materials. The unit includes one (1) furnace firing natural gas and non-hazardous alternative fuels. Acid mist emissions from Unit 4 are controlled by a Brinks mist eliminator before exhausting through one (1) stack, identified as D031. Sulfur dioxide emissions are controlled in the process by a double absorption system.

This is an affected facility under 40 CFR 60, Subpart H and 40 CFR 60, Subpart Cd.

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

New Source Performance Standards (NSPS) Requirements **[326 IAC 2-7-5(1)]** ~~[40 CFR 60, Subpart H]~~

E.2.1 General Provisions Relating to ~~NSPS Subpart H~~ **New Source Performance Standards** [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR Part 60, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC

12-1, for the affected emission units at this source, except when otherwise specified in 40 CFR Part 60, Subpart H, Section D.~~5~~**4** of this permit, or by Appendix A (Alternative Monitoring Plan for SO2 Emissions).

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.2.2 **Standards of Performance for Sulfuric Acid Plants** ~~Sulfuric Acid Plant NSPS~~ [40 CFR 60, Subpart H] [326 IAC 12] ~~[Consent Decree 2:07CV134 WL]~~

~~The Permittee, which operates a sulfuric acid plant, shall comply with the following provisions of 40 CFR Part 60, Subpart H (included as Appendix B of this permit), which are incorporated by reference as 326 IAC 12, except when otherwise specified by Section D.5 of this permit, or by Appendix A (Alternative Monitoring Plan for SO_2 Emissions).The acid mist emission limit shall not be relaxed by any future permit action.~~

~~40 CFR 60.80~~
~~40 CFR 60.80(a)~~
~~40 CFR 60.80(b)~~

~~40 CFR 60.81~~
~~40 CFR 60.81(a)~~
~~40 CFR 60.81(b)~~

~~40 CFR 60.82~~
~~40 CFR 60.82(a)~~

~~40 CFR 60.83~~
~~40 CFR 60.83(a)~~
~~40 CFR 60.83(a)(1)~~
~~40 CFR 60.83(a)(2)~~

~~40 CFR 60.84~~
~~40 CFR 60.84(a)~~
~~40 CFR 60.84(b)~~
~~40 CFR 60.84(c)~~
~~40 CFR 60.84(d)~~
~~40 CFR 60.84(e)~~

~~40 CFR 60.85~~
~~40 CFR 60.85(a)~~
~~40 CFR 60.85(b)~~
~~40 CFR 60.85(b)(1)~~
~~40 CFR 60.85(b)(2)~~
~~40 CFR 60.85(b)(3)~~
~~40 CFR 60.85(b)(4)~~

~~40 CFR 60.85(c)~~
~~40 CFR 60.85(c)(1)~~
~~40 CFR 60.85(c)(1)(i)~~
~~40 CFR 60.85(c)(1)(ii)~~

Pursuant to 40 CFR Part 60, Subpart H, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart H, which are incorporated by reference as 326 IAC 12 (included as Attachment B to this permit), except when otherwise specified by Section D.4 of this permit or by Appendix A (Alternative Monitoring Plan for SO2 Emissions) for the above listed emission units as specified as follows:

(1) 40 CFR 60.80
(2) 40 CFR 60.81
(3) 40 CFR 60.82
(4) 40 CFR 60.83
(5) 40 CFR 60.84
(6) 40 CFR 60.85

***

SECTION E.3. EMISSION UNIT OPERATION CONDITIONS

~~Emission Unit Description~~ ~~[326 IAC 2-7-5(15)]:~~**Specifically Regulated Insignificant Activities**

(~~ff~~**d**) Two (2) Emergency compression ignition generators less than 500 HP. ~~(~~**This is an affected facility under** 40 CFR Part 63, Subpart ZZZZ.~~)~~

(~~gg~~**e**) One (1) fire pump compression ignition RICE engine less than 500 HP. ~~(~~**This is an affected facility under** 40 CFR Part 63, Subpart ZZZZ.~~)~~

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.3.1 General Provisions Relating to National Emissions Standard for Hazardous Air Pollutants **under 40 CFR Part 63** ~~for stationary reciprocating Internal Combustion Engines~~ [326 IAC 20] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.6590, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the ~~affected source~~ **above listed emission units**, as specified in Appendix A of 40 CFR Part 63, Subpart ZZZZ, in accordance with the schedule in 40 CFR 63 Subpart ZZZZ**, in accordance with schedule in 40 CFR Part 63, Subpart ZZZZ**. ~~Pursuant to 40 CFR 63.6645(a)(5), notification requirements from §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b) through (e), and (g) and (h) do not apply to existing stationary emergency RICE, such as the units described in Section E.3.~~

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.3.2 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to 40 CFR 63.6595, the Permittee shall comply with the ~~following~~ provisions of 40 CFR 63, Subpart ZZZZ ~~(National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines)~~, which are included and incorporated by reference as 326 IAC 20-82 **(included as Attachment C to this permit), for the above listed emissions units,** as specified as follows:

~~(1) 40 CFR 63.6603 Table 2d~~
~~(2) 40 CFR 63.6625(e), (f), (h), (i)~~
~~(3) 40 CFR 63. 6605~~
~~(4) 40 CFR 63.6640~~
~~(5) 40 CFR 63.6655 except 63.6655(c)~~

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(3), (f), (h), and (i)
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), and (f)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 4)
(18) Table 6 (item 9)
(19) Table 8

***

Additional Changes

The changes and comments listed below are in response to Eco Services Part 70 Operating Permit Renewal No.: 089-34939-00242 Technical Support Document and Addendum to the Technical Support Document that were inadvertently made without Eco Services review. To help clarify what should have occurred during this time IDEM has addressed each of Eco Services comments below.

Comment 1:

On pages 2 and 3 of the Technical Support Document, the John Zink Furnace is listed as being removed.

Response to Comment 1:

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM OAQ should not have made these changes to the TSD after public notice. IDEM agrees with the source that the John Zink Furnace should not have been placed in the removed emission unit section. The John Zink Furnace was never removed from the source, the current Part 70 Operating Permit Renewal, does have the John Zink Furnace listed in the permitted emission units under condition A.2.

Comment 2:

On page 7 of the Technical Support Document, the Unrestricted Potential Emissions table, the VOC, GHGs as CO2e, single HAPs, and total HAPs numbers should be revised pursuant to the revised calculations.

Response to Comment 2:

In the Technical Support Document of 089-34939-00242, the single HAP calculations were not summed for hydrogen chloride, the VOC sum did not include the fugitive emissions, the total HAPs for Unit 4 were not entered correctly, and the GHGs were being double counted. IDEM OAQ has corrected these errors and has attached the correct and updated emission calculations to this technical support document.

Comment 3:

On TSD page 8, the potential to emit of the source after issuance of renewal table, the GHG values should be updated pursuant to the revised calculations. Other minor updates to the HAP calculations should also be implemented for consistency with the attached calculations.

Response to Comment 3:

The potential to emit summary in the calculations attached to this technical support document illustrates Eco Services the limited potential to emit of the entire source after issuance of renewal in (tons/year) with the updated values.

Comment 4:

On page 8 of the ATSD, under the response to comment 1, Eco Services believes that IDEM intended for the first sentence to say "excluding" rather than "including", since IDEM has taken the John Zink furnace out of Section D.3 of the permit.

Response to Comment 4:

IDEM agrees with the recommend changes, since the John Zink furnace does not have any applicable requirements under Section D.3.

All other comments supplied by Eco Services have been addressed in the Significant Source Modification and Significant Permit Modification.

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-35105-00242 and Significant Permit Modification No. 089-35209-00242. The staff recommends to the Commissioner that this Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Deena Patton 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) 234-5400 or toll free at 1-800-451-6027 extension 4-5400.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Potential to Emit Summary

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

	Uncontrolled Potential To Emit of the Entire Source (tons/year)										
Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP (rate)	Worst Single HAP (pollutant)
Package Boiler	0.77	3.08	3.08	0.24	40.49	2.23	34.01	48,365	0.76	0.73	Hexane
Unit #4 Preheater	0.34	1.37	1.37	0.11	18.04	0.99	15.15	21,541	0.34	0.32	Hexane
Unit #4 SARU	562.07	562.07	562.07	10219	43.43	7.66	9.53	334,295	1622.55	1619.37	HCl
Spent Acid Storage Tanks	0.00	0.00	0.00	0.31	0.00	210.02	0.00	0	22.80	1.43	HCl
Alternative Fuel Storage	0.00	0.00	0.00	0.00	2.28	4.70	12.41	0	16.95	0.21	HCl
John Zink Furnace	0.42	1.66	1.66	0.13	21.90	1.20	18.40	26,157	0.41	0.39	Hexane
Cooling Tower	11.60	8.79	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Molten Sulfur Storage tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive Emissions	0.00	0.00	0.00	0.00	0.00	10.42	0.00	0.00	2.45	0.00	
Total	575.20	576.98	579.78	10220.21	126.14	237.23	89.50	**430,358**	1666.27	1621.01	HCl

	Limited Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)										
Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP (rate)	Worst Single HAP (pollutant)
Package Boiler	0.77	3.08	3.08	0.24	40.49	2.23	34.01	48,365	0.76	0.73	Hexane
Unit #4 Preheater	0.34	1.37	1.37	0.11	18.04	0.99	15.15	21,541	0.34	0.32	Hexane
Unit #4 SARU	71.38	71.38	71.38	3577	43.43	7.66	9.53	334,295	11.28	8.10	HCl
Spent Acid Storage Tanks	0.00	0.00	0.00	0.0031	0.00	10.50	0.00	0	2.83	1.43	HCl
Alternative Fuel Storage	0.00	0.00	0.00	0.00	2.28	4.70	12.41	0	1.07	0.21	HCl
John Zink Furnace	0.42	1.66	1.66	0.13	21.90	1.20	12.41	26,157	0.41	0.39	Hexane
Cooling Tower	11.60	8.79	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Molten Sulfur Storage tank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive Emissions	0.00	0.00	0.00	0.00	0.00	10.42	0.00	0.00	2.45	0.00	
Total	84.51	86.29	89.10	3577.28	126.14	37.71	83.51	**430,358**	19.15	9.74	HCl

Appendix A: Emissions Calculations
Package Boiler

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Package Boiler**
(natural gas)

STACK ID: D011
STACK (DIAM:HEIGHT): (4:55)
FLOWRATE (ACFM): 10538
Ts(°F): 450

CNTRL DEV: None

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
94.3	1020	809.9

Heat Content (Btu/cft):
QTY Burned(mmcft/yr):

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.8	3.1	3.1	0.2	40.5	2.2	34.0

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).
Company submitting EF's for large Boilers since capacity (94 MMBtu) is close to the cut-off for small Boilers
For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	8.504E-04	4.859E-04	3.037E-02	7.289E-01	1.377E-03	7.620E-01

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.025E-04	4.454E-04	5.669E-04	1.539E-04	8.504E-04	**2.219E-03**
					Total HAPs	**7.642E-01**
					Worst HAP	**7.29E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in kg/MMBtu	53.06	1.00E-03	1.00E-04
Potential Emission in tons/yr	48,315	0.91	0.09
Summed Potential Emissions in tons/yr	48,316		
CO2e Total in tons/yr	48,365		

Methodology
CH4 and N2O emission factors from 40 CFR Part 98, Subpart C, Table C-2.
CO2 Emission Factor from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
AP 42, Table 1.4-2, footnote 'a'; convert lb/MMscf to lb/MMBtu, divide by 1020.
CO2 = 120,000 lb/MMscf; (120,000 lb/MMscf)/(1020) = 117.65 lb/MMBtu;
1 pound = 0.45359237 kilogram
(117.65 lb/MMBtu) * (0.45359237 kg/ 1 lb) = 53 kg/MMBtu
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Unit #4 Preheater

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Unit #4 Preheater**
(natural gas)

STACK ID: D021
STACK (DIAM:HEIGHT): (4:35)
FLOWRATE (ACFM): 49000
Ts(°F): 850

CNTRL DEV: None

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
42.0	1020	360.7

Heat Content (Btu/cft): 1050
QTY Burned(mmcft/yr): 4

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.3	1.4	1.4	0.1	18.0	1.0	15.1

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).
Company submitting EF's for large Boilers since capacity (94 MMBtu) is close to the cut-off for small Boilers
For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	3.787E-04	2.164E-04	1.353E-02	3.246E-01	6.132E-04	3.394E-01

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	9.018E-05	1.984E-04	2.525E-04	6.853E-05	3.787E-04	**9.883E-04**
					Total HAPs	**3.404E-01**
					Worst HAP	**3.25E-01**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in kg/MMBtu	53.06	1.00E-03	1.00E-04
Potential Emission in tons/yr	21,519	0.41	0.04
Summed Potential Emissions in tons/yr	21,519		
CO2e Total in tons/yr	21,541		

Methodology
CH4 and N2O emission factors from 40 CFR Part 98, Subpart C, Table C-2.
CO2 Emission Factor from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
AP 42, Table 1.4-2, footnote 'a'; convert lb/MMscf to lb/MMBtu, divide by 1020.
CO2 = 120,000 lb/MMscf; (120,000 lb/MMscf)/(1020) = 117.65 lb/MMBtu;
1 pound = 0.45359237 kilogram
(117.65 lb/MMBtu) * (0.45359237 kg/ 1 lb) = 53 kg/MMBtu
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
John Zink Furnace

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID:	**John Zink Furnace**	STACK ID:	D031
	(natural gas)	STACK (DIAM:HEIGHT):	(6:300)
		FLOWRATE (ACFM):	51000
CNTRL DEV:	None	Ts(°F):	180

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr		
			Heat Content (Btu/cft):	1050
			QTY Burned(mmcft/yr):	15
51.0	1020	438.0		

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.4	1.7	1.7	0.1	21.9	1.2	18.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable 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
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).
Company submitting EF's for large Boilers since capacity (94 MMBtu) is close to the cut-off for small Boilers
For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	4.599E-04	2.6E-04	1.6E-02	3.942E-01	7.446E-04	4.121E-01

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.095E-04	2.409E-04	3.066E-04	8.322E-05	4.599E-04	**1.200E-03**

Total HAPs	**0.41**
Worst HAP	**0.39**

Methodology is the same as above.

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

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in kg/MMBtu	53.06	1.00E-03	1.00E-04
Potential Emission in tons/yr	26,130	0.49	0.05
Summed Potential Emissions in tons/yr	26,131		
CO2e Total in tons/yr	26,157		

Methodology
CH4 and N2O emission factors from 40 CFR Part 98, Subpart C, Table C-2.
CO2 Emission Factor from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
AP 42, Table 1.4-2, footnote 'a'; convert lb/MMscf to lb/MMBtu, divide by 1020.
CO2 = 120,000 lb/MMscf; (120,000 lb/MMscf)/(1020) = 117.65 lb/MMBtu;
1 pound = 0.45359237 kilogram
(117.65 lb/MMBtu) * (0.45359237 kg/ 1 lb) = 53 kg/MMBtu
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25)
+ N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Spent Acid Storage Tanks

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

	STACK ID:	D031	D041
	STACK (DIAM:HEIGHT):	(6:300)	(6:50)
Time Vented to Scrubber (hrs/yr): 849	FLOWRATE (ACFM):	51000	4143
CNTRL DEV: Unit 4 Furnace (Primary), Caustic Scrubber/Vapor Combustor (Backup)	Ts(°F):	180	350

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(lbs/hr)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.00	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM10	0.00	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM2.5	0.00	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
SOx	0.07	99	0.07	1.68	0.31	0.0007	0.0031	N/A	0.00	0.00
NOx	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00
VOC	47.95	95	47.95	1150.80	210.02	2.3975	10.5011	N/A	2.40	10.50
CO	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00
HCl	0.33	0	0.33	7.82	1.43	0.3260	1.4279	N/A	0.33	1.43
CL2	0.08	0	0.08	1.92	0.35	0.0800	0.3504	N/A	0.08	0.35
VOC HAPs	4.80	95	4.80	115.20	21.02	0.2400	1.0512	N/A	0.24	1.05
Total HAPs	--	--	5.21	124.94	**22.80**	0.6460	**2.8295**	N/A	0.65	2.83
LEAD	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00

Enter the time (in hours) the spent acid tanks were vented to the caustic scrubber. This should roughly equal the Unit #4 down time.

From Source:

EF for VOC HAPs is assumed to be 1/10 of the VOC EF value; assumption made by Solvay (Eco Services Operations LLC) and is based on organic HAP content in the VOC.

Total HAPs is sum of VOC HAPs, HCl, and Cl2.

PTE of VOC HAP is controlled by 95%; whereas, the PTE of HCl and Cl2 is not controlled.

Appendix A: Emissions Calculations
Alternative Fuel Storage and Direct Burn

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Unit #4 SARU** (sulfur & spent acid) — STACK ID: D031
MDR (tons/hr): 58.33 — STACK (DIAM:HEIGHT): (6:300)
Yearly Prod. (tons/yr): 307218 — FLOWRATE (ACFM): 51000
CNTRL DEV: Brinks Mist Eliminator — Ts(°F): 180
PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/ton)	CE (%)	POTENTIAL EMISSIONS BEFORE CONTROLS (lbs/hr)	BEFORE CONTROLS (lbs/day)	BEFORE CONTROLS (TPY)	AFTER CONTROLS (lbs/hr)	AFTER CONTROLS (TPY)	(gr/dscf)	Potential to Emit After Issuance (lbs/hr)	Potential to Emit After Issuance (TPY)
PM	2.2000	87.3	128.33	3079.82	562.07	16.30	71.38	0.0450	8.75	38.32
PM10	2.2000	87.3	128.33	3079.82	562.07	16.30	71.38	0.0450	8.75	38.32
PM2.5	2.2000	87.3	128.33	3079.82	562.07	16.30	71.38	0.0450	8.75	38.32
SOx	40.0000	65	2333.20	55996.80	10219	816.62	3576.80	N/A	782.00	638.71
NOx	0.1700	0	9.92	237.99	43.43	9.92	43.43	N/A	9.92	43.43
VOC	0.0300	0	1.75	42.00	7.66	1.75	7.66	N/A	1.75	7.66
CO	0.0373	0	2.18	52.22	9.53	2.18	9.53	N/A	2.18	9.53
LEAD	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00

PM10: 326 IAC 6.8-2-30 - 0.150 lbs/ton H2SO4
SO2: 326 IAC 7-4.1-15 - 782 lbs/hr
SO2: CD 2:07CV134WL - 2.5 lbs/ton

Emission factors from AP-42.
PM10 emissions factor from Table 8-10-2 for spent acid feed. Control efficiency = (2.2-.28)/2.2*100= 87.3%
SO2 emissions factor from Table 8.10-1 @ 97% conversion. 99% conversion for double absorption = 14 lbs/ton. CE = (40-14)/40 * 100 = 65%
Nox emission factor from July 2007 stack test
For Yearly Prod. enter the tons of 100% Sulfuric Acid produced in the given year.

Capacity (TPD of acid produced)	1400	TPD
nonhaz max feed rate	40,000	TPY
assumed % VOCs in nonhaz feeds, annual average	100%	
assumed % HAPs in nonhaz feeds, annual average	60%	
spent acid annual max feed rate:		
spent acid feed rate at former 1100 TPD capacity	900	tpd
spent acid feed rate at 1400 TPD capacity (scale up, and assume up to 366 days/yr)	419,236	TPY
assumed % VOCs in spent acid, annual average	10%	
assumed % HAPs in spent acid, annual average (assume 10% of the VOCs are HAP by weight)	1%	
Maximum Natural Gas Burned (this is not maximum heat input of furnace)	125	MMBTU/hr

Pollutant	Pre-Control TPY	Post-Control TPY	Calculations	/ Notes
Acid Mist / PM / PM10 / PM 2.5	562.10	38.33	0.15	lbs of mist allowed per tons of acid produced, long-term
			2.20	lbs of mist per tons of acid produced, pre-control, assumed
			1400	tons/day max acid production
SO2	10220.00	638.75	2.5	lbs of SO2 allowed per tons of acid produced, long-term
			40.0	lbs of SO2 per tons of acid produced, pre-control, assumed
			1400	tons/day max acid production
NOx	53.61	53.61	0.16785	lbs of NOx per tons of acid produced, 2007 stack test
			1.25	safety scale up factor for test data
			0.20981	lbs of NOx per tons of acid produced, site-specific factor
			1400	tons/day max acid production
VOC	7.67	7.67	0.03	lbs of VOC per tons of acid produced, site-specific factor
			1400	tons/day max acid production
CO	10.13	10.13	0.031727	lbs of CO per tons of acid produced, 2007 stack test
			1.25	safety scale up factor for test data
			0.039660	lbs of CO per tons of acid produced, site-specific factor
			1400	tons/day max acid production
HCl	1619.37	8.097	1,575	tpy max chlorides to furnace
			1.028	lbs of HCl generated per lbs of chlorides
			99.5%	HCl DRE from 1996 Trial Burn
Cl2	3.044	3.044	0.376	lbs Cl per lb HCl in stack (avg of 2000 tests)
			0.0%	Cl2 DRE assumed
VOC HAPs	0.141	0.141	40,000	tpy nonhaz feeds
			60%	HAPs in nonhaz feeds
			419,236	tpy spent acid
			1%	HAPs in spent
			99.9995%	destruction of liquid feeds
Total HAPs	**1622.551**	**11.282**		
CO2e - Allocated to Unit 4 SARU (from natural gas burned)	**64,111**	**64,111**	CO2e from Natural Gas:	
			125	max. Natural Gas Burned (this is not maximum heat input of furnace)
			1,095,000	max MMBTU/yr from natural gas
			53.06	kg CO2 emitted per MMBTU natural gas
			0.001	kg CH4 emitted per MMBTU natural gas
			0.0001	kg N2O emitted per MMBTU natural gas
			1	CO2 global warming potential
			25	CH4 global warming potential
			298	N2O global warming potential
			64,044	tpy CO2 from natural gas
			1.2	tpy CH4 from natural gas
			0.1	tpy N2O from natural gas
			64,111	tpy CO2e from natural gas
CO2e - Allocated to spent tanks	138,264	138,264	CO2e from spent acid	
			419,236	spent acid max feed rate, TPY
			10%	assumed % VOCs in spent acid, annual average
			41,924	tpy VOCs/organic in spent, assumed
			90%	assumed weight % carbon in the VOCs
			100%	assumed %conversion to CO2
			3.664	weight ratio CO2/Carbon
			138,264	tpy CO2 from spent acid feeds
			138,264	tpy CO2e from spent acid feeds
CO2e - Allocated to nonhaz tanks	131,920	131,920	CO2e from nonhaz feeds	
			40,000	nonhaz max feed rate, TPY
			100%	assumed % VOCs in nonhaz feeds, annual average
			40,000	tpy VOCs/organic in nonhaz feeds, assumed
			90%	assumed weight % carbon in the VOCs
			100%	assumed %conversion to CO2
			3.664	weight ratio CO2/Carbon
			131,920	tpy CO2 from nonhaz feeds
			131,920	tpy CO2e from nonhaz feeds
Total CO2e	**334,295**	**334,295**	**334,295**	

Appendix A: Emissions Calculations
Alternative Fuel Storage and Direct Burn

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

			Primary	Backup
MDR (mmcft/hr):	0.007293	STACK ID:	D031	D041
Yearly Average Flow(mmcft/hr):	0.000067	STACK (DIAM:HEIGH	(6:300)	(6:50)
Time Vented to Flare (hrs/yr):	8760	FLOWRATE (ACFM):	51000	4143
CNTRL DEV: Unit 4 Furnace (Primary), Vapor Combustor (Backup)		Ts(°F):	180	350
PERMITTED OPERATING HRS:	8760 hr/yr			

POLLUTANT	EF(lbs/mmcft)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM10	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
PM2.5	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	0.00	0.00
SOx	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	N/A	0.00	0.00
NOx	71.4000	0	0.52	12.50	2.28	0.5207	2.2808	N/A	0.52	2.28
VOC	147.0000	0	1.07	25.73	4.70	1.0721	4.6957	N/A	1.07	4.70
HCl*	0.0489	0	0.05	1.17	0.21	0.0489	0.2142	N/A	0.05	0.21
Cl2*	0.0050	0	0.01	0.12	0.02	0.0050	0.0219	N/A	0.01	0.02
CO	388.4000	0	2.83	67.98	12.41	2.8326	12.4068	N/A	2.83	12.41
VOC HAPs	3.8160	95	3.82	91.58	16.71	0.1908	0.8357	N/A	0.19	0.84
Total HAPs			3.87	92.88	**16.95**	0.2447	1.0718	N/A	0.24	1.07

From Source:

AP-42 emission factors for flares: NOx = 0.0680 lbs/mmBtu VOC = 0.140 lbs/mmBtu CO = 0.37 lbs/mmBtu
Emission factors based on a fuel gas with a heat content of 1050 Btu/cft. *HCl, Cl2, and HAPs emission factors are lbs/hr.
Emission factors for all but HCl Cl2 and HAPs are based on the flare (not the tank), therefore, the control efficiencies are zero.
Enter the time (in hours) the hazardous waste storage tanks were vented to the flare. This should roughly equal the Unit #4 down time.

Total HAPs is sum of VOC HAPs, HCl, and Cl2.
VOC HAPs are organic HAPs, and not inorganic HCl and Cl2 HAP emissions.

Appendix A: Emissions Calculations
Cooling Tower

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: Cooling Tower

STACK ID:
MDR (gpm): 20364
STACK (DIAM:HEIGH n/a
FLOWRATE (ACFM):
Average Circulation Rate: 20364
CNTRL DEV: None
Ts(°F):
(gpm)

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.00013	0	2.65	63.57	11.60	2.65	11.60	N/A	2.65	11.60
PM10	0.00010	0	2.01	48.19	8.79	2.01	8.79	N/A	2.01	8.79
PM2.5	0.00013	0	2.65	63.57	0.00	2.65	11.60	N/A	2.65	11.60
SOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
NOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
VOC	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
CO	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
LEAD	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00

PM emission factor = $\frac{10.84 \text{ lbs solids}}{\text{Mgal}} \times \frac{1 \text{ Mgal}}{1000 \text{ gal}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{0.02}{100}$ drift factor = 0.0001301 $\frac{\text{lbs solids/hr}}{\text{gpm water}}$

PM10 emission factor = (PM emission factor)x0.758

Enter the average cooling water circulation rate for the given year.

Appendix A: Emissions Calculations
Molten Sulfur Storage Tank

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

CALCULATIONS BY: Thomas J. Nyhan NO. OF POINTS: 10

NOTES
EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY
MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY
Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

POINT ID: **Molten Sulfur Storage Tank**

STACK ID:
MDR (T/hr):
STACK (DIAM:HEIGHT):
YEARLY PROD (T/yr): 32,020.29
FLOWRATE (ACFM):
CNTRL DEV: None
Ts(°F):
PERMITTED OPERATING H 8760 hr/yr

POLLUTANT	EF(LB/T)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
H2S	0.0017	0	0.2848	6.8352	1.2474	0.2848	1.2474	N/A	0.2848	1.2474
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
PM2.5	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000
LEAD	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000

Hammond Ordinance No. 3522

H2S Emission Factor = $\frac{0.0017 \text{ lbs H2S}}{\text{Ton Sulfur Loaded}} + \frac{0.21 \text{ lbs H2S}}{\text{Hour}}$

Emission factors are based on calculations submitted by the company in their permit application.
For Yearly Production enter the weight of molten sulfur received in the given year.
Hydrogen Sulfide Scrubber no longer in use.

Appendix A: Emissions Calculations
Fugitive Emissions

Company Name: Eco Services Operations LLC
Address: 2000 Michigan Street, Hammond, IN 46320
Permit No.: 089-35209-00242
Reviewer: Deena Patton

POINT ID: **Fugitive Emissions** STACK ID: n/a
MDR: n/a STACK (DIAM:HEIGHT): n/a
FLOWRATE (ACFM): n/a
CNTRL DEV: None Ts(°F): n/a
PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(lbs/hr)	CE (%)	POTENTIAL EMISSIONS						Potential to Emit After Issuance	
			BEFORE CONTROLS			AFTER CONTROLS				
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)
PM	0.00000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
PM10	0.00000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
PM2.5	0.00000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
SOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
VOC	2.38	0	2.38	57.12	10.42	2.38	10.42	N/A	2.38	10.42
HCl	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
Cl2	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00
HAPs	0.56	0	0.56	13.44	2.45	0.56	2.45	N/A	0.56	2.45

Alternative Monitoring Plan for SO_2 Emissions
Rhodia Inc. Hammond, Indiana
Sulfuric Acid Regeneration Plant with Double Absorption

Justification for Using an Alternative Monitoring Plan (AMP) for SO_2 emissions

The regulations that established the NSPS for sulfuric acid plants are over 30 years old. At the time, the regulatory standard was established as 4 lb of SO_2 emissions per ton of 100 % sulfuric acid produced, and compliance with the standard was to be demonstrated using a calculation similar to Equation 1 below. Regulations required the use of a CEMS to measure SO_2 concentration at the stack (M2), but only required measurement of SO_2 entering the converter by suitable method three times per calendar day. Plants typically rely on the use of a Reich test once per shift to establish the SO_2 concentration entering the converter (M1). While the stack measurement represented a nearly continuous real time indication of the stack concentration, performing a Reich test once per shift for the converter inlet concentration provides little more than a random sample once every eight hours.

The methodology proposed in this AMP will provide a more continuous real-time indication of compliance by using a process analyzer to measure the converter inlet SO_2 concentration. While this analyzer will be nearly identical to the CEMS that is commonly used at the stack, it will not be able to meet all of the standards that are usually applied to a CEMS because of the process conditions and / or physical limitations of an existing facility. For example, it is not feasible to modify the existing ductwork around the analyzer to meet the normal guidelines for straight runs of pipe upstream / downstream of the analyzer. We believe that the disadvantages (places where the analyzer is not quite up to CEMS standards) are far outweighed by the advantages of using a real time instrument, rather than a periodic Reich test, to measure the converter inlet concentration. Rhodia will use best professional judgment to ensure the analyzer located at the converter inlet provides representative data.

Except as noted in this document, the objective of this proposed AMP is to maintain the process analyzer at the converter inlet in a manner that is similar to the stack CEMS, as set forth in 40 CFR Part 60, Appendix B and F.

Definitions

"CEMS" or "Continuous Emission Monitoring System" shall mean equipment that continuously measures and records the concentration and/or emission rate of a pollutant, in the units specified by the emission limit concerned.

"Long-Term Limit" shall mean a sulfur dioxide (SO_2) emission limit for a sulfuric acid plant expressed as pounds per ton of 100% sulfuric acid produced ("lbs/ton"), averaged over all Operating Hours in a rolling 365-day period.

"Malfunction" shall mean, consistent with 40 C.F.R. § 60.2, any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, but shall not include failures that are caused in part by poor maintenance or careless operation.

"Operating Hours" shall mean periods during which sulfur or sulfur-bearing compounds, excluding conventional fossil fuels such as natural gas or fuel oil, are being fed to the furnace.

"Short-Term Limit" shall mean the SO_2 emission limit for each sulfuric acid plant expressed as pounds per ton of 100% sulfuric acid produced ("lbs/ton"), averaged over each rolling 3-hour period. Except for periods of Startup, Shutdown and Malfunction, the Short-Term Limits established under this Consent Decree shall apply at all times.

"Shutdown" shall mean the cessation of operation of a sulfuric acid plant for any reason. Shutdown begins at the time sulfur or sulfur-bearing feeds, excluding conventional fossil fuels such as natural gas or fuel oil, to the furnace ceases.

"Startup" shall mean the 24-hour period at any sulfuric acid plant beginning when the feed of sulfur or sulfur-bearing materials, excluding conventional fossil fuels such as natural gas or fuel oil, to the furnace commences after a main gas blower shutdown.

Pt. 60.84 Emissions Monitoring.

Compliance with the Long-Term Limit and Short-Term Limit defined by the Consent Decree will be demonstrated using SO_2 analyzers at the converter inlet and exit stack using the following equation. Refer to additional discussion below the equation for specific details related to data input and calculation.

Equation 1

$$Xe = (M1 - M2)/(M1 - 1.5 \times M1 \times M2)$$
$$E = (K / Xe) - K$$

Where:

- Xe = fractional conversion efficiency
- M1 = fractional concentration of SO_2 entering the converter
- M2 = fractional concentration of SO_2 at the stack
- E = SO_2 emission rate in lb / ton of 100 % acid produced
- K = 1306 = (2000 lb / ton) x (64 lb / lbmol SO2)/(98 lb / lbmol H_2SO_4)

Short-Term Limit

The following procedure and calculation will be performed once every five minutes during all Operating Hours, except periods of Startup, Shutdown or Malfunction, to demonstrate compliance with the Short-Term Limit for SO_2.

- At any given time the system will maintain an array consisting of the 36 most recent samples of the SO_2 concentrations at the converter inlet and at the exit stack.
- Once every five minutes, the system will sample the latest SO_2 concentrations, add the recent readings to the array and delete the oldest readings. If the unit is not operating then the array of data will not change.
- $M1_{3hravg}$ will then be calculated as the arithmetic average of the 36 most recent data samples for the fractional concentration of SO_2 entering the converter ($M1_{3hravg}$).
- $M2_{3hravg}$ will then be calculated as the arithmetic average of the 36 most recent data samples for the fractional concentration of SO_2 at the stack ($M2_{3hravg}$).
- The rolling 3 hour average SO_2 emissions (E_{3hravg}) will then be calculated per Equation 2.

Equation 2 (rolling 3 hour average SO_2 emissions)

$$Xe_{3hravg} = (M1_{3hravg} - M2_{3hravg})/(M1_{3hravg} - 1.5 \times M1_{3hravg} \times M2_{3hravg})$$
$$E_{3hravg} = (K / Xe_{3hravg}) - K$$

- The production unit will be deemed to be operating in compliance with the Short Term Limit if $E_{3hr\text{-}avg}$ does not exceed 3.5 lb of SO_2 per ton of 100% sulfuric acid produced during all Operating Hours except periods of Startup, Shutdown or Malfunction.

During routine calibration checks and adjustments of the SO_2 monitors, the SO_2 measurement will be "frozen" at its pre-calibration level. Refer to System Maintenance and Malfunction for guidance during CEMS malfunctions, breakdowns, and repairs.

Long-Term Limit

The following method will be used to calculate the daily average lb of SO_2 per ton of 100% sulfuric acid, and the number of Operating Hours for the calendar day.

- Once every five minutes during all Operating Hours, the SO_2 concentrations (converter inlet and exit stack) will be sampled and this time will be counted as five operating minutes. If the unit is not operating, then the SO_2 concentrations will not be sampled.

- The daily average will be calculated as follows for each calendar day:
  - $M1_{daily\ avg}$ will be calculated as the arithmetic average of the sample population for the fractional concentration of SO_2 entering the converter.
  - $M2_{daily\ avg}$ will be calculated as the arithmetic average of the sample population for the fractional concentration of SO_2 at the stack
  - $E_{(daily\ avg)}$ will then be calculated using Equation 3.

    Equation 3 (daily average SO_2 emissions)

    $$Xe_{daily\ avg} = (M1_{daily\ avg} - M2_{daily\ avg})/(M1_{daily\ avg} - 1.5 \times M1_{daily\ avg} \times M2_{daily\ avg})$$

    $$E_{daily\ avg} = (K / Xe_{daily\ avg}) - K$$

  - The number of operating minutes for the day will be summed (T_{day},)
  - E_{dayavg} and T_{day} will be used to calculate a 365-day rolling average of lb/ton. The daily averages will be weighted by the number of operating minutes per day, as per Equation 4.

Once the system has been in operation for 365 days, compliance with the Long Term Limit (365-day rolling average) SO_2 emission rate will be calculated using Equation 4.

Equation 4

$$E_{365avg} = \frac{\sum [E_{dayavg} * T_{day}]}{\sum T_{day}}$$

The production unit will be deemed to be operating in compliance with the Long-Term Limit if E_{365avg} does not exceed 2.5 lb of SO_2 per ton of 100% sulfuric acid produced during all Operating Hours

During routine calibration checks and adjustments of the SO_2 monitors, the SO_2 measurement will be "frozen" at its pre-calibration level. Refer to System Maintenance and Malfunction for guidance during CEMS malfunction, breakdowns, and repairs.

Pt. 60.84 Emissions Monitoring Pt. 60, App. B, Spec. 2, Section 6.0 (Stack and Converter Inlet Analyzers)

Rhodia proposes to use the following stack analyzer specifications to satisfy the requirements of Pt. 60.84 and Pt. 60, App. B, Spec. 2, Section 6.0. The stack analyzer span must be capable of accommodating elevated emissions during startup. Specifications for the analyzer located at the converter inlet are based on Rhodia's experience with process analyzers at these locations.

An equivalent analyzer may be substituted for any reason.

Location	Manufacturer	Model Number	Range
Stack	Ametek Photometric Analyzer (or equivalent)	460 (or equivalent)	Dual range: Normal: 0 – 500 ppm SO_2 SSM: 0 – 3,600 ppm SO_2
Converter Inlet	Ametek Photometric Analyzer (or equivalent)	460 (or equivalent)	Single range: 0 – 15 % SO_2

Pt. 60, App. B, Spec. 2, Section 1.0 (Stack and Converter Inlet Analyzers)

Initial compliance certification required only if the analyzer is replaced or if system modifications require one to be performed. Additional detail and exceptions noted below under System Modifications below.

Pt. 60, App. B, Spec. 2, Section 8.0 (Converter Inlet Analyzer)

Rhodia will select the optimum location to obtain representative SO_2 readings from this location. Turbulence near the blower exit and elevated temperature at the converter inlet may require an analyzer measurement location that differs from the requirements of this section (e.g. pollutant stratification). A pollutant stratification test is not warranted for this application because (a) process conditions make it extremely unlikely that stratification could occur, and (b) the samples obtained under this monitoring plan are the same as would be obtained under the NSPS, except that the instrument will typically take 288 samples per day rather than the 3 required by the NSPS. Therefore, no new stratification risk is introduced by this method, but the instrument will typically take about 100 times as many samples.

Pt. 60, App. B, Spec. 2, Section 16.0 (Converter Inlet Analyzer)

Rhodia will use the Alternative Relative Accuracy Procedure provided in Section 16.2.1 (i.e. conduct a cylinder gas audit).

Pt. 60, App. F, Spec. 2, Section 5.0 (Converter Inlet Analyzer)

Rhodia will use quarterly cylinder gas audits (i.e. four per year) to satisfy the requirements of this section.

System Maintenance and Malfunction

Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the plant shall conduct monitoring in continuous operation during all Operating Hours as defined above

In the event of a CEMS malfunction of greater than 24 hours:

- Exit stack gas will be sampled and analyzed at least once per hour, during all Operating Hours. Sampling will be conducted by Reich test or other method (e.g. portable analyzer).
- Converter inlet gas will either be sampled, or estimated using engineering judgment, at least once every four hours during all Operating Hours.
- Compliance with the Short-Term Limit and Long-Term Limit shall be verified by using these data and Equations 2, 3, and 4 with the following exceptions. If the stack CEMS is out of service, the most recent hourly reading will be substituted for the 12 five-minute readings that would otherwise be taken if the system was operating normally. Similarly, if the converter inlet SO_2 analyzer is out of service, the most recent four-hour reading will be substituted for the 48 five-minute readings that would otherwise be taken if the system was operating normally.

In the event of an analyzer malfunction, a like-kind replacement may be used while repairs are being made. A cylinder gas audit (CGA) must be performed on the replacement analyzer as soon as is practicable after it is placed in service. The daily calibration drift requirement would also apply to the replacement analyzer.

System Modifications

Significant replacement, modification, or change in certified CEMS equipment may require a complete recertification. If a recertification is required, it will be conducted within 90 days. Examples include:

- Change in location or orientation of the sampling probe or site
- Complete replacement of an existing continuous emission monitoring system.

When replacing components that can alter the physical characteristics or conditioning of the sample in the field, a CGA is required. The following activities will require a CGA to be performed before returning the analyzer to service.

- Replacement of the analyzer
- Detector replacement
- Replacement of equipment associated with the detector

The following activities are not expected to trigger a CGA. However, it is recommended that a Calibration Drift check be performed before returning to service.

- Filter replacement
- Data Recorder Repairs
- Tubing replacement

General guidance: When replacing components or devices that do not affect the physical characteristics or handling of the gas in the field such as data recorders, a CGA is not required. A calibration drift check normally should be conducted. If the repaired component affects the transport of the gas to the analyzer, such as replacing tubing, a leak check should be conducted.

Alternative Monitoring System

The monitoring system proposed in this Alternative Monitoring Plan is expected to be a significant improvement over the monitoring requirements contained in the NSPS for sulfuric acid plants. However, the real-time calculation of SO_2 emissions is dependent upon the use of an SO_2 analyzer in the inlet duct to the converter, and the maintenance of that analyzer to approximately the same performance standards normally applied to the stack SO_2 CEMS. This is an unproven application of this technology, and there is some risk that the converter inlet SO_2 analyzer will not be able to perform as required despite the best efforts of Rhodia and the instrument manufacturer.

If Rhodia and the instrument manufacturer are unable to make the system operate to the indicated standards because the converter inlet SO_2 analyzer is unreliable and / or inaccurate in this application, then Rhodia will promptly notify EPA Region 5, IDEM and HDEM of its determination and proceed as follows:

- Rhodia will immediately begin meeting its SO_2 emissions monitoring requirements in accordance with 40 CFR Part 60, Subpart H, except that the SO_2 concentration at the converter inlet will be analyzed six times per day rather than the three times per day specified in the regulations.
- Rhodia will provide whatever information is requested by EPA regarding the determination that the converter inlet SO_2 analyzer can not meet the necessary performance standards.
- Rhodia will work with EPA to determine whether real time measurement of SO_2 emissions (in lbs / ton of acid) can be readily accomplished through other means without the use of an SO_2 analyzer at the converter inlet.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Greg Yates
Eco Services Operations, LLC
2000 Michigan Street
Hammond, IN 46230

DATE: March 11, 2015

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

SUBJECT: Final Decision
Title V Significant Permit Modification
089-35209-00242

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

March 11, 2015

TO: Hammond Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Eco Services Operations LLC
Permit Number: 089-35209-00242

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	VHAUN 3/11/2015 Eco Services Operations LLC 089-35209-00242 FINAL			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Greg Yates Eco Services Operations LLC 2000 Michigan Street Hammond IN 46320 (Source CAATS) VIA CERTIFIED MAIL USPS									
2		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
3		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
4		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
5		Hammond City Council and Mayors Office 5925 Calumet Avenue Hammond IN 46320 *(Local Official)*									
6		Hammond Public Library 564 State St Hammond IN 46320-1532 *(Library)*									
7		Shawn Sobocinski 5950 Old Porter Rd Aprt 306 Portage IN 46368-1558 *(Affected Party)*									
8		Mark Coleman 8 Turret Rd. Portage IN 46368-1072 *(Affected Party)*									
9		Mr. Chris Hernandez Pipefitters Association, Local Union 597 45 N Ogden Ave Chicago IL 60607 *(Affected Party)*									
10		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
11		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 *(Local Official)*									
12		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 *(Affected Party)*									
13		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)									
14		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									
15		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	
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FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	VHAUN 3/11/2015 Eco Services Operations LLC 089-35209-00242 FINAL			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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1		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)									
2		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									
3		Ron Novak Hammond Dept. of Environmental Management 5925 Calumnet Ave. Hammond IN 46320 *(Local Official)*									
4		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
5		Ryan Dave 939 Cornwallis Munster IN 46321 *(Affected Party)*									
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