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:	February 19, 2015
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Eco Services Operations LLC
Permit Level:	Title V Significant Source Modification
Permit Number:	089-35105-00242
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 35105.

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

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

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

(continues on next page)

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

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

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

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

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

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February 19, 2015

Mr. Greg Yates
Eco Services Operations, LLC
2000 Michigan Street
Hammond, IN 46320

Re: 089-35105-00242
Significant Source Modification

Dear Mr. Yates,

Eco Services Operations, LLC was issued Part 70 Operating Permit Renewal No. T089-33025-00242 on May 30, 2014 for a stationary sulfuric acid manufacturing operation located at 2000 Michigan Street, Hammond, IN 46320. An application to modify the source was received on November 3, 2014. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

The following insignificant acitivies were inadvertantly removed from the final version of the Part 70 Operating Permit Renewal No. T089-33025-00242, issued on May 30, 2014:

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) 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.

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 and 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.

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, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Deena Patton or extension 4-5400 or dial (317) 234-5400.

Sincerely,

Tripurari Sinha

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

Attachments: Significant Source Modification and Technical Support Document

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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Significant Source Modification to a 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 construct subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

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

Significant Source Modification No.: 089-35105-00242	
Issued by: Tripurari Sinha Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: February 19, 2015

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-7-4(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 SARU, 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 NESHAP.

(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 emission 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 SARU, 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU.

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 SARU 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 SARU 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 SARU Dry Tower and Unit #4 SARU

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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU 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 SARU, 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: _____

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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
Reviewer: Deena Patton

POINT ID: **Unit #4 SARU** (sulfur & spent acid) | MDR (tons/hr): 58.33 | Yearly Prod. (tons/yr): 307218 | STACK ID: D031 | STACK (DIAM:HEIGHT): (6:300) | FLOWRATE (ACFM): 51000 | Ts(°F): 180
CNTRL DEV: Brinks Mist Eliminator
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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)]

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(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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
Reviewer: Deena Patton

POINT ID: **Unit #4 SARU** (sulfur & spent acid) — MDR (tons/hr): 58.33 — Yearly Prod. (tons/yr): 307218 — STACK ID: D031 — STACK (DIAM:HEIGHT): (6:300) — FLOWRATE (ACFM): 51000 — Ts(°F): 180

CNTRL DEV: Brinks Mist Eliminator

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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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.: 089-35105-00242
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

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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 46320

DATE: February 19, 2015

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

SUBJECT: Final Decision
Title V Significant Source Modification
089-35105-00242

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

February 19, 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: 089-35105-00242

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 2/19/2015 Eco Services Operations LLC 089-35105-00242 FINAL		
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**

AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING

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)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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Mail Code 61-53

IDEM Staff	VHAUN 2/19/2015 Eco Services Operations LLC 089-35105-00242 FINAL		
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**

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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		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)*									
6											
7											
8											
9											
10											
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15											

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