



Thomas M. McDermott, Jr.
Mayor

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CITY OF HAMMOND

RONALD L. NOVAK

Director

September 30, 2008

Kia Zuber
Environmental Engineer
Rhodia, Inc.
2000 Michigan Street
Hammond, IN 46320

Re: 089-26205-00242
Significant Source Modification to
Part 70 permit T089-7258-00242

Dear Ms. Zuber:

Rhodia, Inc. was issued Part 70 operating permit T089-7258-00242 on February 5, 2001 for a sulfuric acid regeneration facility. An application to modify the source was received on March 3, 2008. Pursuant to 326 IAC 2-7-10.5, the following emission unit is approved for modification at the source:

One (1) sulfuric acid regeneration unit, identified as Unit 4, 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. The furnace is rated at two hundred sixty (260) MMBtu per hour. 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.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This Significant Source Modification authorizes modification of the emission unit. The proposed operating conditions applicable to this emission unit are attached to this Significant Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 Operating Permit Renewal currently under review.

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 call (219) 853-6306 and ask for Thomas J. Nyhan.

Sincerely,

Original signed by

Ronald L. Novak, Director
Hammond Department of Environmental Management
Air Pollution Control Division

Enclosure

TJN

cc: IDEM-OAQ, Mindy Hahn, Permits Administration



Thomas M. McDermott, Jr.
Mayor

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CITY OF HAMMOND

RONALD L. NOVAK
Director

SIGNIFICANT SOURCE MODIFICATION TO A PART 70 OPERATING PERMIT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

and

HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AIR POLLUTION CONTROL DIVISION

**Rhodia, Inc.
2000 Michigan Street
Hammond, Indiana 46320**

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for new and 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.: T089-26205-00242	
Issued by: _____ original signed by Ronald L. Novak, Director Hammond Department of Environmental Management	Issuance Date: <u>September 30, 2008</u>

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

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary Sulfuric Acid Regeneration Facility.

Source Address: 2000 Michigan Street, Hammond, Indiana 46320
Mailing Address: Same
General Source Phone Number: (219) 932-7651
SIC Code: 2819 – Industrial Inorganic Chemicals
County Location: Lake County

Source Location Status: Nonattainment for PM_{2.5} standard
Nonattainment for 8-hour ozone standard
Attainment for all other criteria pollutant standards

Source Status: Part 70 Operating Permit Program
Major Source under PSD
Major Source under 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(15)]

This significant source modification approval consists of the following emission units and pollution control devices:

One (1) sulfuric acid regeneration unit, identified as Unit 4, 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. The furnace is rated at two hundred sixty (260) MMBtu per hour. 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.

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

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour.
- (b) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
- (c) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hr, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hr.
- (d) Combustion source flame safety purging on startup.
- (e) 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.

- (f) 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 230,000 gallons per month.
- (g) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (h) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (i) Refractory storage not requiring air pollution control equipment.
- (j) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (k) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (l) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (m) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (n) 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.
- (o) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (p) Closed loop heating and cooling systems.
- (q) Cutting 20,000 linear feet or less of one inch (1") plate or equivalent.
- (r) Using 80 tons or less of welding consumables.
- (s) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
- (t) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
- (u) Forced and induced draft cooling tower system not regulated under a NESHAP.
- (v) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (w) Heat exchanger cleaning and repair.
- (x) Process vessel degassing and cleaning to prepare for internal repairs.
- (y) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.
- (z) Paved and unpaved roads and parking lots with public access.
- (aa) Asbestos abatement projects regulated by 326 IAC 14-10.

- (bb) 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.
- (cc) 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.
- (dd) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (ee) On-site fire and emergency response training approved by the department.
- (ff) Gasoline generators not exceeding 110 horsepower.
- (gg) Diesel generators not exceeding 1600 horsepower.
- (hh) Stationary fire pumps.
- (ii) 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.
- (jj) Purge double block and bleed valves.
- (kk) Filter or coalescer media changeout.
- (ll) Vents from ash transport systems not operated at positive pressure.
- (mm) A laboratory as defined in 326 IAC 2-7-1(20)(c).
- (nn) Non-hazardous material drum handling and storage area.
- (oo) Non-hazardous truck activities.
- (pp) Non-hazardous container sampling.
- (qq) Molten sulfur unloading and storage.
- (rr) Ash/brick handling and storage.
- (ss) Commercial sulfuric acid storage, loading, and unloading operations (storage tank, rail car and truck).
- (tt) Catalyst screening with particulate emission control.
- (uu) Portable Brink for acid mist control during maintenance.
- (vv) Painting of facility equipment.
- (ww) Sand blasting.
- (xx) Valves and flanges.
- (yy) Roadway fugitive dust.
- (zz) Acid filter precoat vent.
- (aaa) Wastewater neutralization.

(bbb) Tank cleaning.

(ccc) Fresh acid loading.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 Applicability).

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, T089-21241-00242, 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 and HDEM, 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]

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

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 and HDEM, within a reasonable time, any information that IDEM, OAQ and HDEM may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ and HDEM 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) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) The "responsible official" is defined in 326 IAC 2-7-1(34).

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the Permittee'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 in letter form no later than April 15 of each year to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

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 and HDEM 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 and HDEM may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each emission unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ and HDEM upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and HDEM. IDEM, OAQ and HDEM may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.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 emission unit was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ and HDEM within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

IDEM Northwest Regional Office

Telephone Number: 219-757-0265
Facsimile Number: 219-757-0267

HDEM

Telephone Number: 219-853-6306
Facsimile Number: 219-853-6343

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

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ and HDEM may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAQ and HDEM 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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 in 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) In addition to the nonapplicability determinations set forth in Sections D of this permit, the IDEM, OAQ has made the following determinations regarding this source:
 - (1) 40 CFR Part 61, Subpart FF, National Emission Standard for Benzene Waste Operations no longer applies to Rhodia's Hammond facility. Rhodia no longer accepts hazardous waste at its Hammond facility, therefore, the facility is no longer considered a hazardous waste treatment, storage and disposal facility (TSDF). According to 40 CFR 61.340, Subpart FF applies to chemical manufacturing plants, coke byproduct recovery plants, petroleum refineries and hazardous waste TSDFs that treat, store or dispose of waste from the aforementioned facilities. Rhodia's Hammond facility no longer meets these applicability requirements.
 - (2) 40 CFR Part 63, Subpart DD, National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations no longer applies to Rhodia's Hammond facility. Since Rhodia is no longer regulated as a hazardous waste TSDF and the facility does not treat off-site wastewater, the facility doesn't meet the Subpart's applicability standard as stated in 40 CFR 63.680. Furthermore, Rhodia's Hammond facility is no longer a major source of hazardous air pollutants (HAPs) as defined in 40 CFR 63.2.
 - (3) 40 CFR Part 63, Subpart Q, National Emissions Standard for Hazardous Air Pollutants for Industrial Process Cooling Towers does not apply to Rhodia's Hammond facility on the basis that the source's cooling towers do not operate with chromium-based water treatment chemicals. Furthermore, Rhodia's Hammond facility is no longer a major source of hazardous air pollutants (HAPs) as defined in 40 CFR 63.2.
 - (4) 40 CFR Part 63, Subpart EEEE, National Emission Standards for Hazardous Air Pollutants: Organic Liquid Distribution (Non-Gasoline) does not apply to Rhodia's Hammond facility on the basis that the facility was no longer a major source of HAPs, as defined in 40 CFR 63.2, prior to the compliance date of Subpart EEEE (February 5, 2007).
 - (5) 326 IAC Article 19 Mobile Source Rules, and the CAA Title I Sec 182(d)(1)(B), related to employee trip reduction do not apply to the Rhodia's Hammond facility on the basis that fewer than 100 people are employed at the facility.

- (6) EPA's Commercial and Industrial Solid Waste Incineration rules (40 CFR Part 60, Subparts CCCC and DDDD), IDEM's Incinerator Regulation (326 IAC 4-2), and Hammond's Incinerator Regulations (Hammond Ordinance No. 3522, Section 6.3 as amended by Hammond Ordinance No. 5090) do not apply to Unit 4 at Rhodia's Hammond facility, as Unit 4 is a sulfur recovery unit that treats various sulfur bearing materials by combusting them with natural gas and other fuels.
- (7) 40 CFR 60 Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units does not apply to Rhodia's Hammond facility on the basis that the Package Boiler was installed prior to the applicability date of June 9, 1989.
- (8) 40 CFR 60 Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 does not apply to Tanks 72, 73, 74 and 75 because the capacity of each of these storage vessels is less than 75 cubic meters (19,812 gallons).
- (9) 326 IAC 8-9, Volatile Organic Liquid Storage Vessels does not apply to Tanks 70 and 71, nor to Tanks 46, 47, 56, 57 and 58 because these storage vessels are subject to 40 CFR 60 Subpart Kb.
- (c) 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 or HDEM 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.
- (d) 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.
- (e) 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.
- (f) 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).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ or HDEM has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ or HDEM 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 T089-21241-00242 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 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

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

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.16 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 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ or HDEM 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 or HDEM 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 or HDEM at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and HDEM may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 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 HDEM, 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(40) and 326 IAC 2-7-1(21). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

- (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 and HDEM 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 and HDEM take final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and HDEM any additional information identified as being needed to process the application.

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

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 emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

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

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.21 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2] [326 IAC 2-3-2]

- (a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

- (b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2-2 or 326 IAC 2-3-2.

B.22 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, HDEM and 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.23 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
Permits Branch, Office of Air Quality
100 North Senate Avenue,
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, IN 46320

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.24 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 and HDEM 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 and HDEM 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.25 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 5-1-3 (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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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). The provisions of 326 IAC 6-4 are not federally enforceable.

C.5 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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

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

- (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) Indiana Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

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

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

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

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

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

- (b) The Permittee shall notify IDEM, OAQ and HDEM of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and HDEM not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and HDEM, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within thirty (30) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, equipment cannot be installed and operated within thirty (30) days, the Permittee may extend the compliance schedule related to the equipment for an additional thirty (30) days provided the Permittee notifies:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

in writing, prior to the end of the initial thirty (30) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)] [Consent Decree 2:07CV134 WL]

- (a) All SO₂ CEMS shall be installed, certified, calibrated, maintained and operated according to the requirements of the Alternative Monitoring Plan (AMP) approved by U.S. EPA and included in Appendix A of this permit.
- (b) In the event of an SO₂ CEMS malfunction of greater than 24 hours, the Permittee shall follow procedures specified in the approved AMP.

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request the IDEM, OAQ or HDEM approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate 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.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on March 31, 1997. The Permittee submitted an update to its ERP on February 29, 2000.
- (b) Upon direct notification by IDEM, OAQ or HDEM, 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.14 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.15 Response to Excursions and Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

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

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ and HDEM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected emission unit while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
- (1) 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 emission 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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

The emission statement does require the certification by the responsible official as defined by 326 IAC 2-7-1(34).

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

C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

- (a) Records of all required monitoring data, reports and support information required by this Permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or HDEM makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner and HDEM within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in a significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with the following:

- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, document and maintain the following records:
 - (A) A description of the project.
 - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1 (rr)(2)(A)(iii) or 326 IAC 2-3-1(mm)(2)(A)(3); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (2) 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
- (3) 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.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue
Hammond, Indiana 46320

- (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 and HDEM on or before the date it is due.

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C.18 – General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) or 326 IAC 2-3-1(II)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ and HDEM:
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C - General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C.18- General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for a project at an existing emissions unit shall be submitted within 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 (c)(2) and (3) 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) or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

and

Hammond Department of Environmental Management
5925 Calumet Avenue, Room 304
Hammond, Indiana 46320

- (h) 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 or HDEM. The general public may request this information from the IDEM, OAQ or HDEM under 326 IAC 17.1.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

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

Consent Decree (Civil Action No. 2:07CV134 WL)

C.21 Consent Decree Requirements

On July 23, 2007, the United States District Court for the Northern District of Indiana, Hammond Division entered a Consent Decree (Civil Action No. 2:07CV134 WL) to resolve alleged past violation issues at this source and seven other sulfuric acid manufacturing plants located in California, Louisiana, and Texas. Pursuant to Paragraph 17 of the Consent Decree, the Permittee shall incorporate the emission limits in Paragraph 11 of the Consent Decree, and the monitoring requirements in Paragraph 13 of the Consent Decree into this Title V permit, and shall also incorporate applicability of 40 CFR Part 60, Subparts A and H. Pursuant to Paragraph 17.d of the Consent Decree, the SO₂ and sulfuric acid mist emission limitations incorporated pursuant to the Consent Decree shall not be relaxed by any future permit action.

SECTION D.8

EMISSION UNIT OPERATION CONDITIONS

Sulfuric Acid Regeneration Unit (Unit 4)

Emission Unit Description [326 IAC 2-7-5(15)]:

One (1) sulfuric acid regeneration unit, identified as Unit 4, 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. The furnace is rated at two hundred sixty (260) MMBtu per hour. 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.

(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.8.1 Particulate Matter Less Than 10 Microns in Diameter (PM₁₀) [326 IAC 6.8-2-30] [Consent Decree 2:07CV134 WL]

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

D.8.2 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 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.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Condition B.10 - Preventive Maintenance Plan, of this permit, is required for this emission unit and its control equipment.

D.8.4 HAPs Minor Limit

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 to less than 10 tons per year and will make the source an area source for HAPs.

D.8.5 Nonhazardous Alternative Fuel Acceptance [Hammond Ordinance No. 3522 (as amended)]

Nonhazardous alternative fuels with a heat content less than 5,000 BTU/lb cannot be fed to the Unit 4 furnace.

Compliance Determination Requirements

D.8.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

A compliance stack test shall be performed at the Unit 4 stack to demonstrate compliance with the acid mist emission limit in Condition D.8.1. The compliance stack test shall be performed within 60 days after achieving a production capacity of 1,340 tons of 100% sulfuric acid per day, but not later than October 1, 2011, utilizing methods as approved by the Commissioner. The compliance test shall be repeated every five (5) years of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Condition C.7 – Performance Testing.

D.8.7 Control of Particulate Emissions (PM₁₀)

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

D.8.8 Continuous Emissions Monitoring Requirement [326 IAC 7-4.1-15(b)] [Consent Decree 2:07CV134 WL]

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

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

D.8.9 PM₁₀ Continuous Compliance [326 IAC 6.8-8]

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.8.10 Visible Emissions Notations

- (a) Visible emission notations of the Unit 4 stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

D.8.11 Record Keeping Requirements

- (a) To document compliance with Condition D.8.9(a), 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 compliance with Condition D.8.9(b), the Permittee shall maintain records of daily visible emissions notations for the Unit 4 stack exhaust. The Permittee shall include in its daily record when a visible emissions notation is not taken and the reason for the lack of the visible emissions notation, (e.g., the process did not operate that day).
- (c) To document compliance with Condition D.8.2(a), the quantity of sulfur dioxide emitted from the Unit 4 stack shall be recorded on an hourly basis, in units of pounds per hour.
- (d) The quantity of sulfuric acid produced (on a 100% H₂SO₄ equivalent basis) by Unit 4 shall be recorded once every hour during all Operating Hours, in units of tons per hour.
- (e) The fractional concentration of SO₂ 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 SO₂ at the stack shall be recorded once every five (5) minutes during all operating hours, as defined in the Alternative Monitoring Plan.
- (g) The short-term sulfur dioxide emission rate shall be calculated and recorded once every five minutes during all operating hours, except periods of startup, shutdown or malfunction, in accordance with the Alternative Monitoring Plan contained in Appendix A.
- (h) Beginning on July 1, 2008, the long-term sulfur dioxide emission rate shall be calculated and recorded on a daily basis in accordance with the Alternative Monitoring Plan contained in Appendix A. The Permittee shall maintain records of the short-term and long-term sulfur dioxide emission rates required to be calculated as described in the Alternative Monitoring Plan contained in Appendix A.

- (i) The Permittee shall record the quantity of natural gas burned in the Unit 4 furnace on an hourly basis, in units of million cubic feet per hour.
- (j) The Permittee shall record the quantity of spent acid fed to the Unit 4 furnace on a minutely basis, in units of pounds or gallons per minute.
- (k) The Permittee shall record the quantity of molten sulfur fed to the Unit 4 furnace on a minutely basis, in units of pounds per minute.
- (l) To document compliance with Condition D.8.4, the Permittee shall maintain records of the quantity of chlorides fed to the Unit 4 furnace on a monthly basis. These records shall be based on annual certification analyses of the materials fed to the Unit 4 furnace. For materials fed from storage tanks, an average value may be used.
- (m) The Permittee shall record the quantity of non-hazardous alternative fuels fed to the Unit 4 furnace on an hourly basis, in units of pounds or gallons per hour.

D.8.12 Reporting Requirements

- (a) Pursuant to 326 IAC 7-4.1-15(b), the Permittee shall submit a report to IDEM, OAQ, and HDEM within 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.8.2(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) The Permittee shall submit a report to HDEM within 30 days after the end of each calendar year. This report shall include the quantity of natural gas burned in the Unit 4 furnace (in units of million cubic feet per year), the quantity of non-hazardous alternative fuels burned in the Unit 4 furnace (in units of million pounds), the quantity of spent acid fed to the Unit 4 furnace (in units of tons), the quantity of 100% sulfuric acid produced by Unit 4 (in units of tons per year), and the quantity of chlorides fed to the Unit 4 furnace (in units of tons per year) during the preceding year.

New Source Performance Standards (NSPS) Requirements [40 CFR 60, Subpart H]

D.8.13 General Provisions Relating to NSPS Subpart H [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 H, Section D.8 of this permit, or by Appendix A (Alternative Monitoring Plan for SO₂ Emissions).

D.8.14 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.8 of this permit, or by Appendix A (Alternative Monitoring Plan for SO₂ Emissions). The acid mist emission limit shall not be relaxed by any future permit action.

40 CFR 60.80 Applicability and designation of affected facility.
40 CFR 60.80(a)
40 CFR 60.80(b)

40 CFR 60.81 **Definitions.**

40 CFR 60.81(a)

40 CFR 60.81(b)

40 CFR 60.82 **Standard for sulfur dioxide.**

40 CFR 60.82(a)

40 CFR 60.83 **Standard for acid mist.**

40 CFR 60.83(a)

40 CFR 60.83(a)(1)

40 CFR 60.83(a)(2)

40 CFR 60.84 **Emission monitoring.**

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 **Test methods and procedures.**

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)

**Alternative Monitoring Plan for SO₂ Emissions
Rhodia Inc. Hammond, Indiana
Sulfuric Acid Regeneration Plant with Double Absorption**

Justification for Using an Alternative Monitoring Plan (AMP) for SO₂ emissions

The regulations that established the NSPS for sulfuric acid plants are over 30 years old. At the time, the regulatory standard was established as 4 lb of SO₂ emissions per ton of 100 % sulfuric acid produced, and compliance with the standard was to be demonstrated using a calculation similar to Equation 1 below. Regulations required the use of a CEMS to measure SO₂ concentration at the stack (M2), but only required measurement of SO₂ entering the converter by suitable method three times per calendar day. Plants typically rely on the use of a Reich test once per shift to establish the SO₂ concentration entering the converter (M1). While the stack measurement represented a nearly continuous real time indication of the stack concentration, performing a Reich test once per shift for the converter inlet concentration provides little more than a random sample once every eight hours.

The methodology proposed in this AMP will provide a more continuous real-time indication of compliance by using a process analyzer to measure the converter inlet SO₂ concentration. While this analyzer will be nearly identical to the CEMS that is commonly used at the stack, it will not be able to meet all of the standards that are usually applied to a CEMS because of the process conditions and / or physical limitations of an existing facility. For example, it is not feasible to modify the existing ductwork around the analyzer to meet the normal guidelines for straight runs of pipe upstream / downstream of the analyzer. We believe that the disadvantages (places where the analyzer is not quite up to CEMS standards) are far outweighed by the advantages of using a real time instrument, rather than a periodic Reich test, to measure the converter inlet concentration. Rhodia will use best professional judgment to ensure the analyzer located at the converter inlet provides representative data.

Except as noted in this document, the objective of this proposed AMP is to maintain the process analyzer at the converter inlet in a manner that is similar to the stack CEMS, as set forth in 40 CFR Part 60, Appendix B and F.

Definitions

"CEMS" or "Continuous Emission Monitoring System" shall mean equipment that continuously measures and records the concentration and/or emission rate of a pollutant, in the units specified by the emission limit concerned.

"Long-Term Limit" shall mean a sulfur dioxide (SO₂) emission limit for a sulfuric acid plant expressed as pounds per ton of 100% sulfuric acid produced ("lbs/ton"), averaged over all Operating Hours in a rolling 365-day period.

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

"Operating Hours" shall mean periods during which sulfur or sulfur-bearing compounds, excluding conventional fossil fuels such as natural gas or fuel oil, are being fed to the furnace.

"Short-Term Limit" shall mean the SO₂ emission limit for each sulfuric acid plant expressed as pounds per ton of 100% sulfuric acid produced ("lbs/ton"), averaged over each rolling 3-hour period. Except for periods of Startup, Shutdown and Malfunction, the Short-Term Limits established under this Consent Decree shall apply at all times.

"Shutdown" shall mean the cessation of operation of a sulfuric acid plant for any reason. Shutdown begins at the time sulfur or sulfur-bearing feeds, excluding conventional fossil fuels such as natural gas or fuel oil, to the furnace ceases.

"Startup" shall mean the 24-hour period at any sulfuric acid plant beginning when the feed of sulfur or sulfur-bearing materials, excluding conventional fossil fuels such as natural gas or fuel oil, to the furnace commences after a main gas blower shutdown.

Pt. 60.84 Emissions Monitoring.

Compliance with the Long-Term Limit and Short-Term Limit defined by the Consent Decree will be demonstrated using SO₂ analyzers at the converter inlet and exit stack using the following equation. Refer to additional discussion below the equation for specific details related to data input and calculation.

Equation 1

$$X_e = (M1 - M2) / (M1 - 1.5 \times M1 \times M2)$$

$$E = (K / X_e) - K$$

Where:

- X_e = fractional conversion efficiency
- M1 = fractional concentration of SO₂ entering the converter
- M2 = fractional concentration of SO₂ at the stack
- E = SO₂ emission rate in lb / ton of 100 % acid produced
- K = 1306 = (2000 lb / ton) x (64 lb / lbmol SO₂) / (98 lb / lbmol H₂SO₄)

Short-Term Limit

The following procedure and calculation will be performed once every five minutes during all Operating Hours, except periods of Startup, Shutdown or Malfunction, to demonstrate compliance with the Short-Term Limit for SO₂.

- At any given time the system will maintain an array consisting of the 36 most recent samples of the SO₂ concentrations at the converter inlet and at the exit stack.
- Once every five minutes, the system will sample the latest SO₂ concentrations, add the recent readings to the array and delete the oldest readings. If the unit is not operating then the array of data will not change.
- M1_{3hravg} will then be calculated as the arithmetic average of the 36 most recent data samples for the fractional concentration of SO₂ entering the converter (M1_{3hravg}).
- M2_{3hravg} will then be calculated as the arithmetic average of the 36 most recent data samples for the fractional concentration of SO₂ at the stack (M2_{3hravg}).
- The rolling 3 hour average SO₂ emissions (E_{3hravg}) will then be calculated per Equation 2.

Equation 2 (rolling 3 hour average SO₂ emissions)

$$X_{e3hravg} = (M1_{3hravg} - M2_{3hravg}) / (M1_{3hravg} - 1.5 \times M1_{3hravg} \times M2_{3hravg})$$

$$E_{3hravg} = (K / X_{e3hravg}) - K$$

- The production unit will be deemed to be operating in compliance with the Short Term Limit if E_{3hr-avg} does not exceed 3.5 lb of SO₂ per ton of 100% sulfuric acid produced during all Operating Hours except periods of Startup, Shutdown or Malfunction.

During routine calibration checks and adjustments of the SO₂ monitors, the SO₂ measurement will be "frozen" at its pre-calibration level. Refer to System Maintenance and Malfunction for guidance during CEMS malfunctions, breakdowns, and repairs.

Long-Term Limit

The following method will be used to calculate the daily average lb of SO₂ per ton of 100% sulfuric acid, and the number of Operating Hours for the calendar day.

- Once every five minutes during all Operating Hours, the SO₂ concentrations (converter inlet and exit stack) will be sampled and this time will be counted as five operating minutes. If the unit is not operating, then the SO₂ concentrations will not be sampled.
- The daily average will be calculated as follows for each calendar day:
 - o M1_{daily avg} will be calculated as the arithmetic average of the sample population for the fractional concentration of SO₂ entering the converter.
 - o M2_{daily avg} will be calculated as the arithmetic average of the sample population for the fractional concentration of SO₂ at the stack
 - o E_(daily avg) will then be calculated using Equation 3.

Equation 3 (daily average SO₂ emissions)

$$X_{e \text{ daily avg}} = (M1_{\text{daily avg}} - M2_{\text{daily avg}}) / (M1_{\text{daily avg}} - 1.5 \times M1_{\text{daily avg}} \times M2_{\text{daily avg}})$$
$$E_{\text{daily avg}} = (K / X_{e \text{ daily avg}}) - K$$

- o The number of operating minutes for the day will be summed (T_{day})
- o E_{dayavg} and T_{day} will be used to calculate a 365-day rolling average of lb/ton. The daily averages will be weighted by the number of operating minutes per day, as per Equation 4.

Once the system has been in operation for 365 days, compliance with the Long Term Limit (365-day rolling average) SO₂ emission rate will be calculated using Equation 4.

Equation 4

$$E_{365 \text{ avg}} = \frac{\sum [E_{\text{dayavg}} * T_{\text{day}}]}{\sum T_{\text{day}}}$$

The production unit will be deemed to be operating in compliance with the Long-Term Limit if E_{365avg} does not exceed 2.5 lb of SO₂ per ton of 100% sulfuric acid produced during all Operating Hours

During routine calibration checks and adjustments of the SO₂ monitors, the SO₂ measurement will be "frozen" at its pre-calibration level. Refer to System Maintenance and Malfunction for guidance during CEMS malfunction, breakdowns, and repairs:

Pt. 60.84 Emissions Monitoring Pt. 60, App. B, Spec. 2, Section 6.0 (Stack and Converter Inlet Analyzers)

Rhodia proposes to use the following stack analyzer specifications to satisfy the requirements of Pt. 60.84 and Pt. 60, App. B, Spec. 2, Section 6.0. The stack analyzer span must be capable of accommodating elevated emissions during startup. Specifications for the analyzer located at the converter inlet are based on Rhodia's experience with process analyzers at these locations.

An equivalent analyzer may be substituted for any reason.

Location	Manufacturer	Model Number	Range
Stack	Ametek Photometric Analyzer (or equivalent)	460 (or equivalent)	Dual range: Normal: 0 – 500 ppm SO ₂ SSM: 0 – 3,600 ppm SO ₂
Converter Inlet	Ametek Photometric Analyzer (or equivalent)	460 (or equivalent)	Single range: 0 – 15 % SO ₂

Pt. 60, App. B, Spec. 2, Section 1.0 (Stack and Converter Inlet Analyzers)

Initial compliance certification required only if the analyzer is replaced or if system modifications require one to be performed. Additional detail and exceptions noted below under System Modifications below.

Pt. 60, App. B, Spec. 2, Section 8.0 (Converter Inlet Analyzer)

Rhodia will select the optimum location to obtain representative SO₂ readings from this location. Turbulence near the blower exit and elevated temperature at the converter inlet may require an analyzer measurement location that differs from the requirements of this section (e.g. pollutant stratification). A pollutant stratification test is not warranted for this application because (a) process conditions make it extremely unlikely that stratification could occur, and (b) the samples obtained under this monitoring plan are the same as would be obtained under the NSPS, except that the instrument will typically take 288 samples per day rather than the 3 required by the NSPS. Therefore, no new stratification risk is introduced by this method, but the instrument will typically take about 100 times as many samples.

Pt. 60, App. B, Spec. 2, Section 16.0 (Converter Inlet Analyzer)

Rhodia will use the Alternative Relative Accuracy Procedure provided in Section 16.2.1 (i.e. conduct a cylinder gas audit).

Pt. 60, App. F, Spec. 2, Section 5.0 (Converter Inlet Analyzer)

Rhodia will use quarterly cylinder gas audits (i.e. four per year) to satisfy the requirements of this section.

System Maintenance and Malfunction

Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the plant shall conduct monitoring in continuous operation during all Operating Hours as defined above

In the event of a CEMS malfunction of greater than 24 hours:

- Exit stack gas will be sampled and analyzed at least once per hour, during all Operating Hours. Sampling will be conducted by Reich test or other method (e.g. portable analyzer).
- Converter inlet gas will either be sampled, or estimated using engineering judgment, at least once every four hours during all Operating Hours.
- Compliance with the Short-Term Limit and Long-Term Limit shall be verified by using these data and Equations 2, 3, and 4 with the following exceptions. If the stack CEMS is out of service, the most recent hourly reading will be substituted for the 12 five-minute readings that would otherwise be taken if the system was operating normally. Similarly, if the converter inlet SO₂ analyzer is out of service, the most recent four-hour reading will be substituted for the 48 five-minute readings that would otherwise be taken if the system was operating normally.

In the event of an analyzer malfunction, a like-kind replacement may be used while repairs are being made. A cylinder gas audit (CGA) must be performed on the replacement analyzer as soon as is practicable after it is placed in service. The daily calibration drift requirement would also apply to the replacement analyzer.

System Modifications

Significant replacement, modification, or change in certified CEMS equipment may require a complete recertification. If a recertification is required, it will be conducted within 90 days. Examples include:

- Change in location or orientation of the sampling probe or site
- Complete replacement of an existing continuous emission monitoring system.

When replacing components that can alter the physical characteristics or conditioning of the sample in the field, a CGA is required. The following activities will require a CGA to be performed before returning the analyzer to service.

- Replacement of the analyzer
- Detector replacement
- Replacement of equipment associated with the detector

The following activities are not expected to trigger a CGA. However, it is recommended that a Calibration Drift check be performed before returning to service.

- Filter replacement
- Data Recorder Repairs
- Tubing replacement

General guidance: When replacing components or devices that do not affect the physical characteristics or handling of the gas in the field such as data recorders, a CGA is not required. A calibration drift check normally should be conducted. If the repaired component affects the transport of the gas to the analyzer, such as replacing tubing, a leak check should be conducted.

Alternative Monitoring System

The monitoring system proposed in this Alternative Monitoring Plan is expected to be a significant improvement over the monitoring requirements contained in the NSPS for sulfuric acid plants. However, the real-time calculation of SO₂ emissions is dependent upon the use of an SO₂ analyzer in the inlet duct to the converter, and the maintenance of that analyzer to approximately the same performance standards normally applied to the stack SO₂ CEMS. This is an unproven application of this technology, and there is some risk that the converter inlet SO₂ analyzer will not be able to perform as required despite the best efforts of Rhodia and the instrument manufacturer.

If Rhodia and the instrument manufacturer are unable to make the system operate to the indicated standards because the converter inlet SO₂ analyzer is unreliable and / or inaccurate in this application, then Rhodia will promptly notify EPA Region 5, IDEM and HDEM of its determination and proceed as follows:

- Rhodia will immediately begin meeting its SO₂ emissions monitoring requirements in accordance with 40 CFR Part 60, Subpart H, except that the SO₂ concentration at the converter inlet will be analyzed six times per day rather than the three times per day specified in the regulations.
- Rhodia will provide whatever information is requested by EPA regarding the determination that the converter inlet SO₂ analyzer can not meet the necessary performance standards.
- Rhodia will work with EPA to determine whether real time measurement of SO₂ emissions (in lbs / ton of acid) can be readily accomplished through other means without the use of an SO₂ analyzer at the converter inlet.

40 CFR Part 60, Subpart H – Standards of Performance for Sulfuric Acid Plants

§ 60.80 Applicability and designation of affected facility.

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

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

§ 60.81 Definitions.

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

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

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

§ 60.82 Standard for sulfur dioxide.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H₂SO₄. Note that other conditions of this permit may include a more stringent sulfur dioxide emission limit.

§ 60.83 Standard for acid mist.

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

(1) Contain acid mist, expressed as H₂SO₄, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H₂SO₄.

(2) Exhibit 10 percent opacity, or greater.

§ 60.84 Emission monitoring.

(a) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under §60.13(d), shall be sulfur dioxide (SO₂). Method 8 shall be used for conducting monitoring system performance evaluations under §60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.

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

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

where:

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

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

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

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

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

(d) Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO₂ emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO₂, O₂, and CO₂ (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO₂ monitor shall be as specified in paragraph (b) of this section. The span value for CO₂ (if required) shall be 10 percent and for O₂ shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO₂ emission rate as follows:

$$E_s = (C_s S) / [0.265 - (0.126\%O_2) - (A \%CO_2)]$$

where:

E_s = emission rate of SO₂, kg/metric ton (lb/ton) of 100 percent of H₂SO₄ produced.

C_s = concentration of SO₂, kg/dscm (lb/dscf).

S = acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H₂SO₄ produced.

%O₂ = oxygen concentration, percent dry basis.

A = auxiliary fuel factor,

= 0.00 for no fuel.

= 0.0226 for methane.

= 0.0217 for natural gas.

= 0.0196 for propane.

= 0.0172 for No 2 oil.

= 0.0161 for No 6 oil.

= 0.0148 for coal.

= 0.0126 for coke.

%CO₂ = carbon dioxide concentration, percent dry basis.

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

Use the following table for such conversions:

From	To	Multiply by
g/scm	kg/scm	10 ⁻³
mg/scm	kg/scm	10 ⁻⁶
ppm (SO ₂)	kg/scm	2.660 X 10 ⁻⁶
ppm (SO ₂)	lb/scf	1.660 X 10 ⁻⁶

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

These monitoring conditions are superseded by Consent Decree 2:07CV134 WL and the Alternative Monitoring Plan as approved by U.S. EPA.

§ 60.85 Test methods and procedures.

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

(b) The owner or operator shall determine compliance with the SO₂ acid mist, and visible emission standards in §§60.82 and 60.83 as follows:

(1) The emission rate (E) of acid mist or SO₂ shall be computed for each run using the following equation:

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

where:

E=emission rate of acid mist or SO₂ kg/metric ton (lb/ton) of 100 percent H₂SO₄ produced.

C=concentration of acid mist or SO₂, g/dscm (lb/dscf).

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

P=production rate of 100 percent H₂SO₄, metric ton/hr (ton/hr).

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

(2) Method 8 shall be used to determine the acid mist and SO₂ concentrations (C's) and the volumetric flow rate (Q_{sd}) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

(3) Suitable methods shall be used to determine the production rate (P) of 100 percent H₂SO₄ for each run. Material balance over the production system shall be used to confirm the production rate.

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

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

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

(i) The integrated technique of Method 3 is used to determine the O₂ concentration and, if required, CO₂ concentration.

(ii) The SO₂ or acid mist emission rate is calculated as described in §60.84(d), substituting the acid mist concentration for C_s as appropriate.

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

and

Hammond Department of Environmental Management

**Addendum to the
Technical Support Document for a Part 70 Significant Source Modification**

Source Name:	Rhodia, Inc.
Source Location:	2000 Michigan St., Hammond, IN 46320
County:	Lake
SIC Code:	2819 – Industrial Inorganic Chemicals
Operation Permit No.:	T089-7258-00242
Significant Source Modification No.:	089-26205-00242
Permit Reviewer:	Thomas J. Nyhan, HDEM

On August 7, 2008, the Hammond Department of Environmental Management (HDEM) had a notice published in the Hammond Times, Hammond, Indiana, stating that Rhodia, Inc. had applied for a Significant Source Modification to modify their sulfuric acid regeneration unit (Unit 4). The notice also stated that the HDEM proposed to issue a source modification 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.

HDEM prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

On September 8, 2008, comments were received from Rhodia, Inc. Due to these comments, the HDEM has decided to make the following revisions to the permit (highlighted language has been added, the language with a line through it has been deleted).

Comment #1:

Condition D.8.2(b). The first paragraph of this condition ends with the sentence, “Note that other conditions of this permit may include a more stringent sulfur dioxide emission limit”. Rhodia is uncertain whether this statement is appropriate, given that the Consent Decree limits on sulfur dioxide emissions (SO₂) are more stringent than both the limit in 326 IAC 7-4.1-1.5(a) and the limit in 40 CFR 60, Subpart H.

HDEM Response #1:

The inclusion of the aforementioned sentence was inadvertent and has been stricken from the condition.

Revision #1 (Permit):

D.8.2 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. ~~Note that other conditions of this permit may include a more stringent sulfur dioxide emission limit.~~

- (b) Pursuant to 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). ~~Note that other conditions of this permit may include a more stringent sulfur dioxide emission limit.~~

Comment #2:

Condition D.8.9(b). Rhodia is proposing the pressure drop limit in this condition be revised. Further internal discussions with operations personnel and the mist eliminator manufacturer have led Rhodia to the conclusion that a pressure drop greater than 10 inches of water column across the final Brinks mist eliminator is not an indicator of poor mist eliminator performance (and high acid mist emissions). The manufacturer has guaranteed performance of the final Brinks Mist eliminator under conditions where the pressure drop is as great as 40 inches of water column. Please revise the limit in this condition from 10 inches of water column to 40 inches of water column.

HDEM Response #2:

HDEM and IDEM agree that visible emissions notation is a more appropriate monitoring condition for the mist eliminator. Condition D.8.9 has been revised and Condition D.8.10 has been added as a new condition.

Revision #2 (Permit):

D.8.9 PM₁₀ Continuous Compliance [326 IAC 6.8-8]

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)]

- (b) ~~Pursuant to the source's continuous compliance plan, the pressure drop across the final Brink's mist eliminator shall not exceed ten (10) inches of water column.~~

D.8.10 Visible Emissions Notations

- (a) Visible emission notations of the Unit 4 stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) **If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances shall be considered a deviation from this permit.**

D.8.101 Record Keeping Requirements

- (a) To document compliance with Condition D.8.9(a), 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 compliance with Condition D.8.9(b), the Permittee shall maintain records of ~~daily pressure drop~~ **visible emissions notations** for the ~~final Brink's mist eliminator~~ **Unit 4 stack exhaust**. The Permittee shall include in its daily record when a ~~pressure drop~~ **visible emission** notation is not taken and the reason for the lack of the ~~pressure drop~~ **visible emission** notation, (e.g., the process did not operate that day).

Comment #3:

Technical Support Document (TSD), "Actual Emissions". The actual 2006 VOC emission rate listed in this table is not consistent with the value shown in the table labeled "2006 Plant Totals" on p. 6 of 9 in Appendix A to the TSD. Appendix A shows that Rhodia reported 33 tons of VOC emissions for 2006. Please update the TSD "Actual Emissions" table accordingly.

HDEM Response #3:

The corrected table is shown below.

Revision #3 (TSD):

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2006 OAQ emission data.

Pollutant	Actual Emissions (tons/yr)
PM	Not Reported
PM ₁₀	10
SO ₂	344
VOC	5 33
CO	12
NO _x	47
Total HAPs	0.1

Comment #4:

TSD, "Enforcement Issues". This section indicates that Rhodia has been found in violation of 40 CFR 60, Subpart Kb. Rhodia would like to reiterate its position that submittal of a compliance schedule for NSPS Subpart Kb with the May 2005 Title V Renewal Application was done proactively to ensure site compliance and not because Rhodia possessed data suggesting that materials managed at the site (e.g. spent sulfuric acid) had sufficient vapor pressure to be subject to NSPS Subpart Kb. The compliance schedule addressed the installation of a backup control device for VOC control (i.e. installation of a vapor combustor). Rhodia's primary VOC control device for NSPS Subpart Kb sources is the Unit 4 furnace which provides >99.9999% destruction of VOCs. A detailed analysis of Rhodia's position on this issue was provided to HDEM in a letter dated March 4, 2008.

HDEM Response #4:

The above comment is contradicted by a statement in Rhodia's Part 70 Renewal Application which states, "However, Rhodia has recently obtained data that indicates that some spent acids received at the Hammond Plant may have a VOC vapor pressure greater than 0.5 psia. Furthermore, the VOC vapor pressure may also be in excess of 0.75 psia." HDEM has attempted to conclusively determine the compliance status of Rhodia's Hammond plant via written requests to view the records on 12/12/06 and 1/10/08. As of 8/12/08, Rhodia has failed to produce the vapor pressure records. Absent any records to the contrary, HDEM must conclude that Rhodia is in violation of Subpart Kb for failing to keep the vapor pressure records required under 40 CFR 60.116b. HDEM will continue to seek vapor pressure records in order to determine if Subpart Kb was applicable prior to Rhodia's submission of the Renewal Application on May 5, 2005 and whether or not Rhodia met the requirements of Subpart Kb at that time.

Revision #4:

No TSD revision is necessary.

Comment #5:

TSD, "Permit Level Determination – Part 70". The table labeled "PTE Change of the Modified Units" appears to contain errors for both total particulate matter (PM) and for VOC. The potential errors are as follows.

- As shown in both Rhodia's significant source modification application calculations and in HDEM's TSD Appendix A calculations, the cooling tower potential to emit (PTE) for PM is not equal to the PM₁₀ PTE. The cooling tower PTE for PM is 9.11 tpy before the modification and 11.6 tpy after the modification. Coupled with the PTE for Unit 4 (which HDEM has calculated as 3.09 tpy before the modification and 3.93 tpy after the modification), the correct total PM emission rates for the TSD table labeled "PTE Change of the Modified Units" are 12.2 tpy for before the modification and 15.53 tpy after the modification. The net difference is 3.33 tpy total PM.
- According to HDEM's calculations presented in Appendix A of the TSD, the controlled VOC PTE from Unit 4 prior to the modification is 6.02 tpy and the controlled VOC PTE from Unit 4 after the modification is 7.66 tpy. In the TSD table labeled "PTE Change of the Modified Units", these emission rates are presented as 6.11 tpy and 7.75 tpy, respectively. Please update the TSD table accordingly. Note that the net difference remains the same (1.64 tpy).

HDEM Response #5:

The PM₁₀ numbers were inadvertently placed in the table as PM numbers. The table has been corrected below. The error has no effect on the permit level determination. The VOC numbers, however, are correct. They represent the sum of the VOC numbers for the two tables representing the Unit #4 SARU.

Revision #5 (TSD):

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

PTE Change of the Modified Units

Pollutant	PTE Before Modification (tons/yr)	PTE After Modification (tons/yr)	Net Difference (tons/yr)
PM	40.00 12.2	42.73 15.53	2.73 3.33
PM ₁₀	10.00	12.73	2.73
PM _{2.5}	10.00	12.73	2.73
SO ₂	321.18	408.78	87.60
VOC	6.11	7.75	1.64
CO	7.49	9.53	2.04
NO _x	34.13	43.43	9.30
HAPs	9.50	9.50	0.00

This significant source modification is subject to 326 IAC 2-7-10.5(f)(4) because it has the potential to emit sulfur dioxide (SO₂) at a rate greater than or equal to twenty-five (25) tons per year.

Additionally, the modification will be incorporated into the Part 70 Renewal Operating Permit currently under review.

Comment #6:

TSD, “Permit Level Determination – PSD or Emission Offset”. The table labeled “Actual to Projected Actual – Unit 4 & Cooling Tower Potential Emissions (tons/yr)” appears to contain an error for total particulate matter. As noted above in Comment #4, both Rhodia and HDEM have presented calculations indicating that cooling tower PM emission rates are greater than cooling tower PM₁₀ emission rates. In this TSD table, the baseline emission rates for PM and PM₁₀ are shown as identical to each other (9.5 tpy). While this is the correct value for PM₁₀ (reflecting the sum of 2.55 tpy from Unit 4 and 6.91 tpy from the cooling tower), the correct sum for PM should be 2.55 tpy from Unit 4 and 9.12 tpy from the cooling tower, for a total of 11.7 tpy. Similarly, the projected actual emission rate for PM should be changed to 21.5 tpy (11.6 tpy for the cooling tower and 9.89 tpy for Unit 4).

HDEM Response #6:

The errors relating to the PM emission rates in the table have been corrected below. The errors have no effect on the permit level determination.

Revision #6 (TSD):

Permit Level Determination – PSD or Emission Offset

The following table 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 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Rhodia, Inc. is operating under an U.S. EPA consent decree. The consent decree establishes sulfur dioxide emission limitations for Unit 4 which are part of this modification. Emissions calculations for Unit 4 reflect the requirements of the consent decree.

Actual to Projected Actual - Unit 4 & Cooling Tower Potential Emissions (tons/yr)								
	Sulfuric Acid Mist	PM	PM₁₀	PM_{2.5}	SO₂	VOC	CO	NO_x
Baseline Period	10/2005 - 9/2007	10/2005 - 9/2007	10/2005 - 9/2007	10/2005 - 9/2007	5/2005 - 4/2007	5/2005 - 4/2007	5/2005 - 4/2007	5/2005 / 4/2007
Baseline	2.6	9.5 11.7	9.5	9.5	332.3	0.9	5.2	27.5
Emissions Capable of Being Accommodated During Baseline Period	0.4	0.4	0.4	0.4	53.9	NA	NA	NA
<i>Contemporaneous Increases last 5 yrs.</i> Preheater Burner Installation 2006						0.2		
<i>Contemporaneous Decreases last 5 yrs.</i>						0.0		
Projected Actuals	9.9	18.8 21.5	18.8	18.8	426.1	7.7	10.1	53.6
Emissions Increases (ATPA)	6.9	8.9 9.4	8.9	8.9	39.9	7.0	4.9	26.1
Significant Level or Major Source Threshold	7	25	15	10	40	25	100	40

*25 TPY is the Emission Offset Threshold for VOC in Lake County(DeMinimis).

Comment #7:

TSD, "State Rule Applicability Determination", 326 IAC 6.8-2 (Particulate Matter Limitations for Lake County). The first paragraph of this section ends with the sentence, "Compliance with this limitation shall be demonstrated annually via a stack test required pursuant to Condition D.8.6". In the current version of Condition D.8.6, testing is required within 5 years of the most recent valid compliance demonstration. Please update the TSD accordingly.

HDEM Response #7:

The error has been corrected. The testing condition has been revised to account for the time to complete the modifications to the emission unit. The corrected permit condition and TSD language are presented below.

Revision #7 (Permit & TSD):

D.8.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

A compliance stack test shall be performed at the Unit 4 stack to demonstrate compliance with the acid mist emission limit in Condition D.8.1. **The compliance stack test shall be performed within 60 days after achieving a production capacity of 1,340 tons of 100% sulfuric acid per day, but not later than October 1, 2011, utilizing methods as approved by the Commissioner.** The compliance stack test shall be performed within repeated every 5 years of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Condition C.7 – Performance Testing.

326 IAC 6.8-2 (Particulate Matter Limitations for Lake County)

Pursuant to 326 IAC 6.8-2-30, acid mist emissions for Unit 4 shall not exceed 6.958 pounds per hour or 0.150 pounds per ton, the production being expressed as 100 percent H₂SO₄. Compliance with this limitation shall be demonstrated ~~annually~~ **within 60 days after achieving a production capacity of 1,340 tons of 100% sulfuric acid per day, but not later than October 1, 2011** via a stack test required pursuant to Condition D.8.6. **The compliance stack test shall be repeated every 5 years of the most recent valid compliance deomstration.**

Any control equipment used to comply with these limitations shall be in operation at all times that the associated process is in operation.

Comment #8:

TSD, "Compliance Determination and Monitoring Requirements", Testing Requirements. The first sentence of this paragraph indicates that, "Rhodia, Inc. is required to conduct an annual performance test on Unit 4 to demonstrate compliance with the limits established in 326 IAC 6.8-2-30 and 40 CFR 60.83(a)(1)." As noted above, Condition D.8.6 now requires testing within 5 years of the most recent valid compliance demonstration. Please update the TSD accordingly.

HDEM Response #8:

HDEM has modified the testing requirement as presented in the TSD and permit to account for the increase in production capacity. The corrected permit TSD language is presented below.

Revision #8 (TSD):

The **Compliance Determination Requirements** applicable to this modification are as follows:

Testing Requirements

Rhodia, Inc. is required to conduct ~~an annual~~ a performance test on Unit 4 to demonstrate compliance with the limits established in 326 IAC 6.8-2-30 and 40 CFR 60.83(a)(1). **The compliance stack test shall be performed within 60 days after achieving a production capacity of 1,340 tons of 100% sulfuric acid per day, but not later than October 1, 2011, utilizing methods as approved by the Commissioner. The compliance test shall be repeated every five (5) years of the most recent valid compliance demonstration.** The test already conducted on July 7, 2007 will serve as the initial performance test required under 40 CFR 60.8.

Indiana Department of Environmental Management Office of Air Quality

and

Hammond Department of Environmental Management Air Pollution Control Division

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

Source Description and Location

Source Name:	Rhodia, Inc.
Source Location:	2000 Michigan Street, Hammond, Indiana 46320
County:	Lake
SIC Code:	2819 – Industrial Inorganic Chemicals
Operation Permit No:	089-7258-00242
Operation Permit Issuance Date:	February 5, 2001
Significant Source Modification No:	089-26205-00242
Permit Reviewer:	Thomas J. Nyhan, HDEM

Existing Approvals

Rhodia, Inc. submitted an application for a Part 70 Operating Permit Renewal on May 6, 2005. On March 3, 2008, Rhodia submitted an application for a significant source modification. The source is operating under the following approvals:

Permit Type	Permit Number	Issuance Date
Part 70 Operating Permit	089-7258-00242	February 5, 2001
Administrative Amendment	089-18946-00201	May 18, 2004

County Attainment Status

The following attainment status designations are applicable to Lake County.

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

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.

(i) 1-hour ozone standard

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

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

(ii) 8-hour ozone standard

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

(b) PM2.5

U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM2.5 promulgated on May 8th, 2008, and effective on July 15th, 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the Permit Level Determination – PSD and Emission Offset section.

(c) Other Criteria Pollutants

Lake County has been classified as attainment or unclassifiable in Indiana for PM10, SO2, NOx, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

(e) Fugitive Emissions

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

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/yr)
PM	< 100
PM ₁₀	< 100
PM _{2.5}	< 100
SO ₂	> 100
VOC	> 25
CO	< 100
NO _x	> 100

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because volatile organic compounds (VOC), a nonattainment regulated pollutant, is emitted at a rate of 25 tons per year or more. Also, this existing source is a major stationary source, under nonattainment new source review rules (326 IAC 2-1.1-5) since direct PM_{2.5} and/or SO₂ is emitted at a rate of 100 tons per year or more.
- (c) These emissions are based upon the potential to emit as calculated in Appendix A and the source's 2006 emission statement.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential To Emit (tons/yr)
Chlorine	< 10
Hydrogen Chloride	<10
VOC HAPs	< 10
Total	< 25

- (d) The source is a minor source of hazardous air pollutants (HAPs) because it doesn't have the potential to emit ten (10) tons per year or greater of a single HAP or a total of twenty-five (25) tons per year or greater for all HAPs. The source has agreed to accept HAP emission limitations and restrictions on the amount of chlorides fed to the Unit 4 furnace to ensure that the source is a minor source of HAP emissions.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2006 OAQ emission data.

Pollutant	Actual Emissions (tons/yr)
PM	Not Reported
PM ₁₀	10
SO ₂	344
VOC	5
CO	12
NO _x	47
Total HAPs	0.1

Description of Proposed Modification

The Indiana Department of Environmental Management (IDEM) and Hammond Department of Environmental Management (HDEM) have reviewed a modification application, submitted by Rhodia, Inc. on March 3, 2008, relating to modifications to the sulfuric acid regeneration unit, Unit 4. The following is the description of the modified emission unit and control device as it will appear in Sections A and D of the permit:

One (1) sulfuric acid regeneration unit, identified as Unit 4, 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. The furnace is rated at two hundred sixty (260) MMBtu per hour. 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.

Through this significant source modification, Rhodia will be modifying the existing sulfuric acid regeneration unit, Unit 4 to increase sulfuric acid production from 1,100 tons per day to 1,400 tons per day. The production increase will be achieved by making modifications to the existing Unit 4 process equipment including:

- Modifications to the spent acid recovery system and sulfur gun for throughput increases.
- Modifications in the direct contact gas cooler, plate cooler, drying tower cooler, and water cooling tower for increased cooling.
- Precipitator modifications for increased throughput.
- Catalytic converter 1st/2nd pass divider plate modifications for in-process leakage reduction.

No spent sulfuric acid storage tanks are being added as part of this modification, however, tank throughput will increase. Emissions from the storage tanks and unloading activities will increase, but there will be no increase in the permitted emission rates. Particulate emissions from the cooling tower (considered to be an insignificant activity) will increase due to increase throughput. No new emission points are being created as a result of this modification. No modifications to the other permitted emission units will be made to achieve the production increase.

Enforcement Issues

Rhodia, Inc. was found to be in violation of 40 CFR 60, Subpart H requirements and is currently operating under DOJ Consent Decree #2:07CV134WL.

Rhodia, Inc. was found to be in violation of 40 CFR Part 60, Subpart Kb, 40 CFR Part 60, Subpart H, Consent Decree 2:07CV134WL, and 326 IAC 5-1-4. HDEM and IDEM will take the appropriate enforcement action to resolve the violations.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

PTE Change of the Modified Units			
Pollutant	PTE Before Modification (tons/yr)	PTE After Modification (tons/yr)	Net Difference (tons/yr)
PM	10.00	12.73	2.73
PM ₁₀	10.00	12.73	2.73
PM _{2.5}	10.00	12.73	2.73
SO ₂	321.18	408.78	87.60
VOC	6.11	7.75	1.64
CO	7.49	9.53	2.04
NO _x	34.13	43.43	9.30
HAPs	9.50	9.50	0.00

This significant source modification is subject to 326 IAC 2-7-10.5(f)(4) because it has the potential to emit sulfur dioxide (SO₂) at a rate greater than or equal to twenty-five (25) tons per year.

Additionally, the modification will be incorporated into the Part 70 Renewal Operating Permit currently under review.

Permit Level Determination – PSD or Emission Offset

The following table 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 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Rhodia, Inc. is operating under an U.S. EPA consent decree. The consent decree establishes sulfur dioxide emission limitations for Unit 4 which are part of this modification. Emissions calculations for Unit 4 reflect the requirements of the consent decree.

Actual to Projected Actual - Unit 4 & Cooling Tower Potential Emissions (tons/yr)								
	Sulfuric Acid Mist	PM	PM₁₀	PM_{2.5}	SO₂	VOC	CO	NO_x
Baseline Period	10/2005 - 9/2007	10/2005 - 9/2007	10/2005 - 9/2007	10/2005 - 9/2007	5/2005 - 4/2007	5/2005 - 4/2007	5/2005 - 4/2007	5/2005 / 4/2007
Baseline	2.6	9.5	9.5	9.5	332.3	0.9	5.2	27.5
Emissions Capable of Being Accommodated During Baseline Period	0.4	0.4	0.4	0.4	53.9	NA	NA	NA
<i>Contemporaneous Increases last 5 yrs.</i> Preheater Burner Installation 2006						0.2		
<i>Contemporaneous Decreases last 5 yrs.</i>						0.0		
Projected Actuals	9.9	18.8	18.8	18.8	426.1	7.7	10.1	53.6
Emissions Increases (ATPA)	6.9	8.9	8.9	8.9	39.9	7.0	4.9	26.1
Significant Level or Major Source Threshold	7	25	15	10	40	25	100	40

*25 TPY is the Emission Offset Threshold for VOC in Lake County (De Minimis).

The Permittee has provided information as part of the application for this approval that based on an Actual to Projected Actual test, this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1, Emission Offset and Nonattainment NSR. IDEM, OAQ and HDEM have not reviewed this information and will not be making any determination in this regard as part of this approval. The applicant will be required to keep records and report in accordance with Source obligation in 326 IAC 2-2-8 and 2-3-2.

Pursuant to the South Coast Air Quality Mgmt. Dist. v. EPA, 472 F.3d 882 (D.C. Cir., December 22, 2006) decision, any new or existing source must be subject to the major source applicability cut offs and offset ratios under the area's previous one hour standard designation for VOCs. This modification to an existing major stationary source is minor because the net emissions increase for VOC is less than the significant levels under the de minimis evaluation. Therefore, pursuant to 326 IAC 2-3, 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 sulfuric acid regeneration unit, Unit 4 is subject to 40 CFR Part 60, Subpart H because it is a sulfuric acid production unit which was modified after August 17, 1971. Unit 4 is subject to the following portions of Subpart H, non-applicable portions of Subpart H will not be included in the permit:

40 CFR 60.80 Applicability and designation of affected facility.

- 40 CFR 60.80(a)
40 CFR 60.80(b)

40 CFR 60.81 Definitions.

- 40 CFR 60.81(a)
40 CFR 60.81(b)

40 CFR 60.82 Standard for sulfur dioxide.

40 CFR 60.82(a)

40 CFR 60.83 Standard for acid mist.

40 CFR 60.83(a)

40 CFR 60.83(a)(1)

40 CFR 60.83(a)(2)

40 CFR 60.84 Emission monitoring.

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 Test methods and procedures.

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)

- (b) The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12, apply to Unit 4 except when otherwise specified in 40 CFR 60, Subpart H.

NESHAP:

- (c) There are no 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:

- (d) 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 these criteria, the requirements of 40 CFR Part 64, CAM are applicable to Unit 4. A CAM plan was submitted on May 6, 2005 as part of the source's Part 70 Renewal application.

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 2-6 (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 2-7-5(13)(Preventive Maintenance Plan)

Pursuant to 326 IAC 2-7-5(13), a Preventive Maintenance Plan, is required for the emission units and the emission control devices.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the sulfuric acid regeneration unit, Unit 4, 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 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of 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.

326 IAC 6.8-2 (Particulate Matter Limitations for Lake County)

Pursuant to 326 IAC 6.8-2-30, acid mist emissions for Unit 4 shall not exceed 6.958 pounds per hour or 0.150 pounds per ton, the production being expressed as 100 percent H₂SO₄. Compliance with this limitation shall be demonstrated annually via a stack test required pursuant to Condition D.8.6.

Any control equipment used to comply with these limitations shall be in operation at all times that the associated process is in operation.

326 IAC 6.8-8-1 (Lake County: Continuous Compliance Plan)

The Permittee shall submit to IDEM and HDEM, and maintain at the source a copy of the Continuous Compliance Plan. The Permittee shall perform the inspections, monitoring, and record keeping requirements as specified in 326 IAC 6.8-8-7. The Permittee shall update the CCP, as needed, retain a copy on site, and make the updated CCP available for inspection as specified in 326 IAC 6.8-8. Rhodia submitted their fourth revised CCP on June 2, 2000.

326 IAC 6.8-10 (Fugitive Dust Emissions)

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 7-4.1-1 (Lake County sulfur dioxide emission limitations)

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. Note that other conditions of the permit include a more stringent sulfur dioxide emission limit.

326 IAC 12 (NSPS)

The sulfuric acid regeneration unit, Unit 4 is subject to 40 CFR Part 60, Subpart H. 326 IAC 12-1 incorporates by reference 40 CFR part 60. The Permittee will comply with the provisions of 40 CFR Part 60, Subpart H as detailed in the Federal Rule Applicability section above.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however,

these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

Compliance determination and monitoring requirements pursuant to 40 CFR Part 60, Subpart H will be incorporated into the Part 70 Permit Renewal as listed in the Federal Rule Applicability Determination section above.

The **Compliance Determination Requirements** applicable to this modification are as follows:

Testing Requirements

Rhodia, Inc. is required to conduct an annual performance test on Unit 4 to demonstrate compliance with the limits established in 326 IAC 6.8-2-30 and 40 CFR 60.83(a)(1). The test already conducted on July 7, 2007 will serve as the initial performance test required under 40 CFR 60.8.

Continuous Emissions Monitoring Requirement

Pursuant to 326 IAC 7-4.1-15(b), Rhodia, Inc. is required to operate a continuous analyzer in the stack serving Unit 4. Pursuant to Consent Decree 2:07CV134 WL and 40 CFR 60 Subpart H, the Permittee is required to operate a continuous analyzer in the duct between the Unit 4 Dry Tower and Unit 4 Converter. This dual-analyzer CEMs is utilized to demonstrate compliance with the sulfur dioxide limitations of 326 IAC 7-4.1-15, 40 CFR Part 60, Subpart H and Consent Decree 2:07CV134 WL. The procedures for calculating emissions, maintaining and operating the CEMs are contained in the approved alternative monitoring plan included as Appendix A to the permit.

Particulate Control

In order to comply with particulate matter emission limitations, the final Brinks mist eliminator for particulate (acid mist) control shall be in operation and control emissions at all times that the Unit 4 is in operation, with the exception of cold startups when feeding only natural gas to the furnace.

The **Compliance Monitoring Requirements** applicable to this modification are as follows:

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.

Parametric Monitoring

Pursuant to the source's continuous compliance plan, the pressure drop across the final Brink's mist eliminator shall not exceed ten (10) inches of water column.

This monitoring condition is necessary because the final Brinks mist eliminator for Unit 4 must operate properly to ensure compliance with 40 CFR 60, Subpart H, 326 IAC 12, 326 IAC 6.8-2-30, and Consent Decree 2:07CV134WL.

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. 089-26205-00242. Additionally, the modification will be incorporated into the Part 70 Renewal currently under review. The staff recommends to the Commissioner that this Part 70 Significant Source Modification be approved.

TSD - Appendix A

CALCULATIONS BY: Thomas J. Nyhan

NO. OF POINTS: 8

Emissions Before Modification

****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

MDR (T/hr): [REDACTED]
YEARLY PROD (T/yr): [REDACTED]

STACK ID:
STACK (DIAM:HEIGHT):
FLOWRATE (ACFM):
Ts(°F):

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/T)	CE (%)	(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	N/A	N/A	0.9470	0.94702
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	N/A	N/A	0.0000	0.00000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	N/A	N/A	0.0000	0.00000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	N/A	N/A	0.0000	0.00000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	N/A	N/A	0.0000	0.00000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	N/A	N/A	0.0000	0.00000
LEAD	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	N/A	N/A	0.0000	0.00000

Hammond Ordinance No. 3522

$$\text{H2S Emission Factor} = \frac{0.0017 \text{ lbs H2S}}{\text{Ton Sulfur Loaded}} + \frac{0.21 \text{ lbs H2S}}{\text{Hour}}$$

Emission factors are based on calculations submitted by the company in their permit application.
For Yearly Production enter the weight of molten sulfur received in the given year.
Hydrogen Sulfide Scrubber no longer in use.

POINT ID: Package Boiler
(natural gas)

MDR (mmcf/hr): 0.0898095
MDC (mmBtu/hr): 94.30

STACK ID: D011
STACK (DIAM:HEIGHT): (4:55)
FLOWRATE (ACFM): 10538
Ts(°F): 450

Heat Content (Btu/cft): 1050
QTY Burned(mmcf/yr): 20.33

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/mmcf)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	7.60	0	0.68	16.38	2.99	0.68	2.99	0.01	N/A	N/A	0.08	0.08
PM10	1.90	0	0.17	4.10	0.75	0.17	0.75	0.00	0.76	2.89	0.02	0.02
SOx	0.60	0	0.05	1.29	0.24	0.05	0.24	N/A	N/A	N/A	0.01	0.01
NOx	100.00	0	8.98	215.54	39.34	8.98	39.34	N/A	N/A	N/A	1.02	1.02
VOC	5.50	0	0.49	11.85	2.16	0.49	2.16	N/A	N/A	N/A	0.06	0.06
CO	84.00	0	7.54	181.06	33.04	7.54	33.04	N/A	N/A	N/A	0.85	0.85
HAPs	1.89	0	0.17	4.07	0.74	0.17	0.74	N/A	N/A	N/A	0.02	0.02

PM10: 326 IAC 6.8-2-30 - 0.007 lbs/MMBtu
0.755 lbs/hr

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

PM10 calculate using factor for filterable particulate because SIP limit was established using same.

For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

POINT ID: Unit #4 Preheater
(natural gas)

MDR (mmcf/hr): 0.04
MDC (mmBtu/hr): 42.00

STACK ID: D021
STACK (DIAM:HEIGHT): (4:35)
FLOWRATE (ACFM): 49000
Ts(°F): 850

Heat Content (Btu/cft): 1050
QTY Burned(mmcf/yr): 4

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/mmcf)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	7.60	0	0.30	7.30	1.33	0.30	1.33	0.00	0.00	0.00	0.02	0.02
PM10	1.90	0	0.08	1.82	0.33	0.08	0.33	0.00	0.23	1.29	0.00	0.00
SOx	0.60	0	0.02	0.58	0.11	0.02	0.11	N/A	N/A	N/A	0.00	0.00
NOx	100.00	0	4.00	96.00	17.52	4.00	17.52	N/A	N/A	N/A	0.20	0.20
VOC	5.50	0	0.22	5.28	0.96	0.22	0.96	N/A	N/A	N/A	0.01	0.01
CO	84.00	0	3.36	80.64	14.72	3.36	14.72	N/A	N/A	N/A	0.17	0.17
HAPs	1.89	0	0.08	1.81	0.33	0.08	0.33	N/A	N/A	N/A	0.00	0.00

PM10: 326 IAC 6.8-2-30 - 0.007 lbs/MMBtu
0.23 lbs/hr

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).

PM10 calculate using factor for filterable particulate because SIP limit was established using same.

For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

POINT ID: Unit #4 SARU
(sulfur & spent acid)

CNTRL DEV: Brinks Mist Eliminator

MDR (tons/hr): 45.83
Yearly Prod. (tons/yr): [REDACTED]

STACK ID: D031
STACK (DIAM:HEIGHT): (6:300)
FLOWRATE (ACFM): 51000
Ts(°F): 180

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/ton)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			CONTROLS	CONTROLS
PM	2.2000	99.3	100.83	2419.82	441.62	0.71	3.09	0.0019	N/A	N/A	337.94	2.37
PM10	2.2000	99.3	100.83	2419.82	441.62	0.71	3.09	0.0019	6.96	30.11	337.94	2.37
SOx	40.0000	96	1833.20	43996.80	8029	73.33	321.18	N/A	782.00	501.84	6144.36	245.77
NOx	0.1700	0	7.79	186.99	34.13	7.79	34.13	N/A	N/A	N/A	26.11	26.11
VOC	0.0300	0	1.37	33.00	6.02	1.37	6.02	N/A	N/A	N/A	4.61	4.61
CO	0.0373	0	1.71	41.03	7.49	1.71	7.49	N/A	N/A	N/A	5.73	5.73
LEAD	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.00

Emission factors from AP-42.
PM10 emissions = 0.088 lbs/ton (1998 stack test)
SO2 emissions factor from Table 8.10-1 @ 97% conversion. 96% control efficiency based on double absorption.
Nox emission factor from July 2007 stack test
For Yearly Prod. enter the tons of 100% Sulfuric Acid produced in the given year.

PM10: 326 IAC 6.8-2-30 - 0.150 lbs/ton H2SO4
SO2: 326 IAC 7-4.1-15 - 782 lbs/hr
SO2: CD 2:07CV134WL - 2.5 lbs/ton

POINT ID: Unit #4 SARU
(alternative fuels & spent acid)

CNTRL DEV: Brinks Mist Eliminator

STACK ID: D031
STACK (DIAM:HEIGHT): (6:300)
FLOWRATE (ACFM): 51000
Ts(°F): 180

Allowable Chloride Feed Rate (tons/yr): 1575
Yearly Chloride Feed (tons/yr): 13.15

Maximum Spent Acid Feed Rate (tons/yr): [REDACTED]
Yearly Spent Acid Feed (tons/yr): [REDACTED]
wt% Organics in Spent Acid: [REDACTED]

PERMITTED OPERATING HRS: 8760 hr/yr

POLLUTANT	EF(LB/ton)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			CONTROLS	CONTROLS
HCl	10.2800	0	1.85	44.36	8.10	1.85	8.10	N/A	0.00	0.00	0.07	0.07
Cl	1.6700	0	0.30	7.21	1.32	0.30	1.32	N/A	0.00	0.00	0.01	0.01
VOC	0.0004	0	0.02	0.48	0.09	0.02	0.09	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00

HCl and Cl emission factors based on 1996 Trial Burn (Mode A).
Enter Yearly Chloride Feed and Spent Acid Feed in tons per year.

PM10: 326 IAC 6.8-2-30 - 0.150 lbs/ton H2SO4
SO2: 326 IAC 7-4.1-15 - 782 lbs/hr
SO2: CD 2:07CV134WL - 2.5 lbs/ton

POINT ID: Spent Acid Storage Tanks

STACK ID: D031 D041
STACK (DIAM:HEIGHT): (6:300) (6:50)
FLOWRATE (ACFM): 51000 4143
Ts(°F): 180 350

Time Vented to Scrubber (hrs/yr): [REDACTED]
CNTRL DEV: Unit 4 Furnace (Primary), Caustic Scrubber/Vapor Combustor (Backup)
PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(lbs/hr)	CE (%)	(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	N/A	N/A	0.00	0.00
PM10	0.00	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	N/A	N/A	0.00	0.00
SOx	0.07	99	0.07	1.68	0.31	0.0007	0.0031	N/A	N/A	N/A	0.03	0.00
NOx	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	N/A	N/A	0.00	0.00
VOC	8.29	95	8.29	198.96	36.31	0.4145	1.8155	N/A	N/A	N/A	3.52	0.18
CO	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	N/A	N/A	0.00	0.00
LEAD	0.00	0	0.00	0.00	0.00	0.0000	0.0000	N/A	N/A	N/A	0.00	0.00

Emission Factors taken from January 1997 stack test.

VOC emission factor for potential emissions was based on emissions measured during Amoco spent unloading.

VOC emission factor for Company Actual emissions was based on 50/50 split between Amoco and Shell spent acid which resulted in an average measured emission rate of 5.21 lbs/hr.

Enter the time (in hours) the spent acid tanks were vented to the caustic scrubber. This should roughly equal the Unit #4 down time.

POINT ID: Alternative Fuel Storage and Direct Burn

MDR (mmcf/hr): 0.007293
Yearly Average Flow(mmcf/hr): 0.000067
Time Vented to Flare (hrs/yr): 8760
CNTRL DEV: Unit 4 Furnace (Primary), Vapor Combustor (Backup)
PERMITTED OPERATING HRS: 8760 hr/yr

STACK ID: Primary D031 Backup D041
STACK (DIAM:HEIGHT): (6:300) (6:50)
FLOWRATE (ACFM): 51000 4143
Ts(°F): 180 350

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(lbs/mmcf)	CE (%)	(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	N/A	N/A	0.00	0.00
PM10	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	0.0000	N/A	N/A	0.00	0.00
SOx	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	N/A	N/A	N/A	0.00	0.00
NOx	71.4000	0	0.52	12.50	2.28	0.5207	2.2808	N/A	N/A	N/A	0.02	0.02
VOC	147.0000	0	1.07	25.73	4.70	1.0721	4.6957	N/A	N/A	N/A	0.04	0.04
CO	388.4000	0	2.83	67.98	12.41	2.8326	12.4068	N/A	N/A	N/A	0.11	0.11
LEAD	0.0000	0	0.00	0.00	0.00	0.0000	0.0000	N/A	N/A	N/A	0.00	0.00

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

Emission factors 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.

POINT ID: John Zink Furnace
(natural gas)

MDR (mmcf/hr): 0.0485714
MDC (mmBtu/hr): 51.00

0.048571

STACK ID: D031
STACK (DIAM:HEIGHT): (6:300)
FLOWRATE (ACFM): 51000
Ts(°F): 180

Heat Content (Btu/cft): 1050

QTY Burned(mmcf/yr):

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/mmcf)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	7.60	0	0.37	8.86	1.62	0.37	1.62	0.00	N/A	N/A	0.06	0.0570
PM10	7.60	0	0.37	8.86	1.62	0.37	1.62	0.00	N/A	N/A	0.06	0.0570
SOx	0.60	0	0.03	0.70	0.13	0.03	0.13	N/A	N/A	N/A	0.00	0.0045
NOx	100.00	0	4.86	116.57	21.27	4.86	21.27	N/A	N/A	N/A	0.75	0.7500
VOC	5.50	0	0.27	6.41	1.17	0.27	1.17	N/A	N/A	N/A	0.04	0.0413
CO	84.00	0	4.08	97.92	17.87	4.08	17.87	N/A	N/A	N/A	0.63	0.6300
HAPs	1.89	0	0.09	2.20	0.40	0.09	0.40	N/A	N/A	N/A	0.01	0.0142

Emission factors taken from AP-42 for small industrial boilers (<100 mmBtu).

For QTY Burned enter the amount of natural gas (in million cubic ft) burned in the given year.

POINT ID: Cooling Tower

MDR (gpm): 16000

STACK ID:
STACK (DIAM:HEIGHT):
FLOWRATE (ACFM):
Ts(°F):

n/a

Average Circulation Rate: 16000 (gpm)

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	0.00013	0	2.08	49.95	9.12	2.08	9.12	N/A	N/A	N/A	9.12	9.1160
PM10	0.00010	0	1.58	37.86	6.91	1.58	6.91	N/A	N/A	N/A	6.91	6.9099
SOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
NOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
VOC	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
CO	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
LEAD	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000

PM emission factor = $\frac{10.84 \text{ lbs solids}}{\text{Mgal}} \times \frac{1 \text{ Mgal}}{1000 \text{ gal}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{0.02 \text{ drift factor}}{100} = 0.0001301 \frac{\text{lbs solids/hr}}{\text{gpm water}}$

PM10 emission factor = (PM emission factor)x0.758

Enter the average cooling water circulation rate for the given year.

2006 Plant Totals

(Company Actual in tons)

	PM10	SOx	NOx	VOC	CO	LEAD	HAPs
Molten Sulfur Storage Tank	0.00	0.00	0.00	0.00	0.00	0.00	
Unit #4 Preheater	0.00	0.00	0.20	0.01	0.17		0.00
Unit #4	2.37	245.77	26.11	4.61	5.73	0.00	0.08
Spent Acid Storage Tanks	0.00	0.00	0.00	0.18	0.00	0.00	
Alternative Fuel Storage	0.00	0.00	0.02	0.04	0.11	0.00	
Spills and Releases	0.05	0.08					
Fugitive Emissions				3.00			
John Zink Furnace	0.06	0.00	0.75	0.04	0.63		0.01
Package Boiler	0.02	0.01	1.02	0.06	0.85		0.02
Cooling Tower	6.91	0.00					
Plant Total	9.41	245.87	28.10	7.94	7.50	0.00	0.12
Reported by Company	9.68	343.71	46.84	32.58	11.93	0.00	0.11
Difference	0.27	97.84	47.42	24.65	4.44	0.00	0.01
Percentage Difference	2.89	39.80	168.75	310.58	59.18	0.00	8.74

Plant Totals Before Modification

(Potential in tons)

	PM10	SOx	NOx	VOC	CO	LEAD	HCl	HAPs Cl2	Other	
Molten Sulfur Storage Tank	0.00	0.00	0.00	0.00	0.00	0.00				
Unit #4 Preheater	0.33	0.11	17.52	0.96	14.72				0.33	
Unit #4	3.09	321.18	34.13	6.11	7.49	0.00	8.10	1.32	0.09	
Spent Acid Storage Tanks	0.00	0.31	0.00	36.31	0.00	0.00	1.43	0.35	1.05	
Alternative Fuel Storage	0.00	0.00	2.28	4.70	12.41	0.00	0.21	0.03	0.84	
Spills and Releases	0.05	0.08								
Fugitive Emissions				3.00					2.44	
John Zink Furnace	1.62	0.13	21.27	1.17	17.87				0.40	
Package Boiler	0.75	0.24	39.34	2.16	33.04				0.74	
Cooling Tower	6.91	0.00	0.00	0.00	0.00	0.00				
Plant Total	12.75	322.03	114.54	54.41	85.52	0.00	9.74	1.69	5.89	HAPs Total 17.32
Unit #4 + Cooling Tower	10.00	321.18	34.13	6.11	7.49	0.00	8.10	1.32	0.09	9.50

Emissions After Modification

SSM No. T089-26205-00242

POINT ID: Unit #4 SARU
(sulfur & spent acid)
CNTRL DEV: Brinks Mist Eliminator

MDR (tons/hr): 58.33
Yearly Prod. (tons/yr):
STACK ID: D031
STACK (DIAM:HEIGHT): (6:300)
FLOWRATE (ACFM): 51000
Ts(°F): 180

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	2.2000	99.3	128.33	3079.82	562.07	0.90	3.93	0.0025	N/A	N/A	337.94	2.37
PM10	2.2000	99.3	128.33	3079.82	562.07	0.90	3.93	0.0025	6.96	38.32	337.94	2.37
SOx	40.0000	96	2333.20	55996.80	10219	93.33	408.78	N/A	782.00	638.71	6144.36	245.77
NOx	0.1700	0	9.92	237.99	43.43	9.92	43.43	N/A	N/A	N/A	26.11	26.11
VOC	0.0300	0	1.75	42.00	7.66	1.75	7.66	N/A	N/A	N/A	4.61	4.61
CO	0.0373	0	2.18	52.22	9.53	2.18	9.53	N/A	N/A	N/A	5.73	5.73
LEAD	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.00

Emission factors from AP-42.

PM10 emissions = 0.088 lbs/ton (1998 stack test)

SO2 emissions factor from Table 8.10-1 @ 97% conversion. 96% control efficiency based on double absorption.

Nox emission factor from July 2007 stack test

For Yearly Prod. enter the tons of 100% Sulfuric Acid produced in the given year.

PM10: 326 IAC 6.8-2-30 - 0.150 lbs/ton H2SO4

SO2: 326 IAC 7-4.1-15 - 782 lbs/hr

SO2: CD 2:07CV134WL - 2.5 lbs/ton

POINT ID: Unit #4 SARU
(alternative fuels & spent acid)

STACK ID: D031
STACK (DIAM:HEIGHT): (6:300)
FLOWRATE (ACFM): 51000
Ts(°F): 180

CNTRL DEV: Brinks Mist Eliminator

Allowable Chloride Feed Rate (tons/yr): 1575
Yearly Chloride Feed (tons/yr): 13.15

Maximum Spent Acid Feed Rate (tons/yr):
Yearly Spent Acid Feed (tons/yr):
wt% Organics in Spent Acid:

PERMITTED OPERATING HRS: 8760 hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(LB/ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
HCl	10.2800	0	1.85	44.36	8.10	1.85	8.10	N/A	0.00	0.00	0.07	0.07
Cl	1.6700	0	0.30	7.21	1.32	0.30	1.32	N/A	0.00	0.00	0.01	0.01
VOC	0.0004	0	0.02	0.48	0.09	0.02	0.09	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00
	0.0000	0	0.00	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.00

HCl and Cl emission factors based on 1996 Trial Burn (Mode A).

Enter Yearly Chloride Feed and Spent Acid Feed in tons per year.

PM10: 326 IAC 6.8-2-30 - 0.150 lbs/ton H2SO4

SO2: 326 IAC 7-4.1-15 - 782 lbs/hr

POINT ID: Cooling Tower

MDR (gpm): 20364

STACK ID:

STACK (DIAM:HEIGHT):

n/a

FLOWRATE (ACFM):

Average Circulation Rate: 20364

Ts(°F):

(gpm)

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-02			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL (TPY)	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF	CE (%)	(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	N/A	N/A	11.60	11.6024
PM10	0.00010	0	2.01	48.19	8.79	2.01	8.79	N/A	N/A	N/A	8.79	8.7946
SOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
NOx	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
VOC	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
CO	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000
LEAD	0.00	0	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.0000

$$\text{PM emission factor} = \frac{10.84 \text{ lbs solids}}{\text{Mgal}} \times \frac{1 \text{ Mgal}}{1000 \text{ gal}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{0.02}{100} \text{ drift factor} = 0.0001301 \frac{\text{lbs solids/hr}}{\text{gpm water}}$$

PM10 emission factor = (PM emission factor)x0.758

Enter the average cooling water circulation rate for the given year.

Plant Totals After Modification (Potential in tons)

	PM10	SOx	NOx	VOC	CO	LEAD	HCl	HAPs Cl2	Other	
Molten Sulfur Storage Tank	0.00	0.00	0.00	0.00	0.00	0.00				
Unit #4 Preheater	0.33	0.11	17.52	0.96	14.72				0.33	
Unit #4	3.93	408.78	43.43	7.75	9.53	0.00	8.10	1.32	0.09	
Spent Acid Storage Tanks	0.00	0.31	0.00	36.31	0.00	0.00	1.43	0.35	1.05	
Alternative Fuel Storage	0.00	0.00	2.28	4.70	12.41	0.00	0.21	0.03	0.84	
Spills and Releases	0.05	0.08								
Fugitive Emissions				3.00					2.44	
John Zink Furnace	1.62	0.13	21.27	1.17	17.87				0.40	
Package Boiler	0.75	0.24	39.34	2.16	33.04				0.74	
Cooling Tower	8.79	0.00	0.00	0.00	0.00	0.00				
Unit #4 + Cooling Tower	12.73	408.78	43.43	7.75	9.53	0.00	8.10	1.32	0.09	HAPs Total 9.50
Plant Total after Modification	15.48	409.63	123.84	56.06	87.57	0.00	9.74	1.69	5.89	17.32
Plant Total before Modification	12.75	322.03	114.54	54.41	85.52	0.00	9.74	1.69	5.89	17.32
Increase Due to Modification	2.73	87.60	9.31	1.64	2.04	0.00	0.00	0.00	0.00	0.00

Actual to Projected Actual - Unit 4 & Cooling Tower Emissions (tons/yr)*

	Sulfuric Acid						
	Mist	PM	PM10/PM2.5	SO2	VOC	CO	NOx
Baseline Period	Oct. 2005 -	Oct. 2005 -	Oct. 2005 -	May 2005 -	May 2005 -	May 2005 -	May 2005 -
Baseline Emissions	Sep. 2007	Sep. 2007	Sep. 2007	April 2007	April 2007	April 2007	April 2007
	2.6	9.5	9.5	332.3	0.9	5.2	27.5
Emissions Capable of Being Accomodated During Baseline Period	0.4	0.4	0.4	53.9	NA	NA	NA
Projected Actuals	9.9	18.78	18.78	426.1	7.7	10.1	53.6
Emissions Increases (ATPA)	6.9	8.8	8.8	39.9	6.8	4.9	26.2
Significant Level or Major Source Threshold	7	25	15/10	40	25	100	40

*Data is from Rhodia's application for a significant source modification dated 2/29/08.