



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant  
DATE: December 14, 2007  
RE: W.R. Grace & Co. / 089-19927-00310  
FROM: Matthew Stuckey, Deputy Branch Chief  
Permits Branch  
Office of Air Quality

### **Notice of Decision: Approval – Effective Immediately**

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

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

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

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

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



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100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

## Part 70 Operating Permit OFFICE OF AIR QUALITY

**W.R. Grace & Co. - Conn.  
5215 Kennedy Avenue  
East Chicago, Indiana 46312**

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

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

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

Operation Permit No.: T089-19927-00310	
Original signed by:	Issuance Date: December 14, 2007
	Expiration Date: December 14, 2012
Matthew Stuckey, Deputy Branch Chief Permits Branch Office of Air Quality	

## TABLE OF CONTENTS

<b>A. SOURCE SUMMARY</b> .....	<b>4</b>
A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]	
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]	
A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.4 Part 70 Permit Applicability [326 IAC 2-7-2]	
<b>B. GENERAL CONDITIONS</b> .....	<b>6</b>
B.1 Definitions [326 IAC 2-7-1]	
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)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability [326 IAC 2-7-7]	
B.5 Severability [326 IAC 2-7-5(5)]	
B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]	
B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]	
B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]	
B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]	
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]	
B.11 Emergency Provisions [326 IAC 2-7-16]	
B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]	
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]	
B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]	
B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]	
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]	
B.17 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]	
B.18 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]	
B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]	
B.20 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]	
B.21 Source Modification Requirement [326 IAC 2-7-10.5]	
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]	
B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]	
B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]	
B.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]	
<b>C. SOURCE OPERATION CONDITIONS</b> .....	<b>16</b>
<b>Emission Limitations and Standards [326 IAC 2-7-5(1)]</b>	
C.1 Opacity [326 IAC 5-1]	
C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.4 Fugitive Dust Emissions [326 IAC 6-4]	
C.5 Stack Height [326 IAC 1-7]	
C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
<b>Testing Requirements [326 IAC 2-7-6(1)]</b>	
C.7 Performance Testing [326 IAC 3-6]	
<b>Compliance Requirements [326 IAC 2-1.1-11]</b>	
C.8 Compliance Requirements [326 IAC 2-1.1-11]	

**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)]
- C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]
- C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)]  
[326 IAC 2-7-6(1)]

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

- C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
- C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
- C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

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

- C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)]  
[326 IAC 2-6]
- C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]  
[326 IAC 2-3]
- C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]  
[326 IAC 2-3]

**Stratospheric Ozone Protection**

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

**D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 25**

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

- D.1.1 Particulate Matter Limitations for Lake County - W.R. Grace & Co. (formerly E.I. DuPont)  
[326 IAC 6.8-2-9]
- D.1.2 Lake County: Continuous Compliance Plan [326 IAC 6.8-8-1]
- D.1.3 Particulate Matter Limitations for Lake County: Combustion Sources; Natural Gas - W.R.  
Grace & Co. (formerly E.I. DuPont) [326 IAC 6.8-6-1] [326 IAC 6.8-6-5]
- D.1.4 Lake County Sulfur Dioxide Limitations [326 IAC 7-4.1-1]

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

- D.1.5 Record Keeping Requirement

**D.2. EMISSIONS UNIT OPERATION CONDITIONS..... 26**

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

- D.2.1 Particulate Matter Limitations for Lake County [326 IAC 6.8-1-2]
- D.2.2 Lake County Sulfur Dioxide Limitations [326 IAC 7-4.1-1]

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

- D.2.3 Particulate Control

**D.3. EMISSIONS UNIT OPERATION CONDITIONS..... 29**

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

- D.3.1 Cold Cleaner Operations [326 IAC 8-3-2]
- D.3.2 Cold Cleaner Degreaser Operation and Control [326 IAC 8-3-5]
- D.3.3 Material Requirements for Cold Cleaning Degreasers [326 IAC 8-3-8]

Certification .....	32
Emergency Occurrence Report .....	33
Semi-Annual Natural Gas Fired Boiler Certification.....	35
Quarterly Deviation and Compliance Monitoring Report .....	36

## SECTION A SOURCE SUMMARY

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

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

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The Permittee owns and operates a stationary sodium silicate solution and colloidal silica manufacturing plant.

Source Address:	5215 Kennedy Avenue, East Chicago, Indiana 46312
Mailing Address:	5215 Kennedy Ave., East Chicago, IN 46312
General Source Phone Number:	219-391-4600
SIC Code:	2819
County Location:	Lake
Source Location Status:	Nonattainment for 8-hour ozone standard Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

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

- (a) One (1) Sodium Silicate Furnace, identified as EU-01, fired by natural gas, constructed in 1902, exhausted through stack S/V 01, with a maximum capacity of 9,600 pounds of raw material per hour and 25 million British thermal units per hour.
- (b) Three (3) Stone Johnston Boilers, identified as EU-02, EU-03 and EU-04, fired by natural gas, constructed in March 1986, exhausting through stacks S/V 02, S/V 03 and S/V 04, respectively, with a maximum capacity of 33.5 million British thermal units per hour, each.

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

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

- (a) Back-up generators as follows:
  - (1) One (1) EVC back-up generator, identified as EU-05, fired by natural gas, constructed in 1974, with a maximum capacity of 0.5 million British thermal units per hour. [326 IAC 6.8-1-2] [326 IAC 6.8-8-1]
  - (2) One (1) Powerhouse back-up generator, identified as EU-06, fired by natural gas, constructed in 1971, with a maximum capacity of 0.5 million British thermal units per hour. [326 IAC 6.8-1-2] [326 IAC 6.8-8-1]
- (b) Lime transfer and storage operations, identified as EU-07, constructed in 1972, with a 400 cubic foot storage silo and handled by pneumatic transfer, equipped with filter bags for particulate control, with a maximum throughput of 0.056 ton per hour. [326 IAC 6.8-1-2]

- (c) Sand transfer and storage operations, identified as EU-08, constructed in 1900, with a 20,409 cubic foot storage silo and handled by a bucket elevator, equipped with filter bags for particulate control, with a maximum throughput of 4.2 tons per hour. [326 IAC 6.8-1-2]
- (d) Soda Ash transfer and storage operations, identified as EU-09, constructed in 1900, with a 4,500 cubic foot storage silo and handled by pneumatic transfer, equipped with filter bags for particulate control, with a maximum throughput of 2.2 tons per hour. [326 IAC 6.8-1-2]
- (e) Eight (8) sodium silicate solution storage tanks, identified as EU-10, containing only inorganic chemicals with negligible vapor pressures. [326 IAC 6.8-1-2]
- (f) Nineteen (19) Ludox colloidal silica storage tanks, identified as EU-11, containing organic and inorganic chemicals with negligible vapor pressures. [326 IAC 6.8-1-2]
- (g) The following tanks containing inorganic chemicals with negligible vapor pressures:
  - (1) One (1) sulfuric acid storage tank, identified as EU-13, constructed in 1973, with a maximum capacity of 4,300 gallons. [326 IAC 6.8-1-2]
  - (2) One (1) sulfuric acid storage tank, identified as EU-14, constructed in 1963, with a maximum capacity of 12,000 gallons. [326 IAC 6.8-1-2]
  - (3) Three (3) spent regenerated acid tanks, identified as EU-15, constructed in 1972, containing sulfuric acid, with a maximum capacity of 33,000 gallons, each. [326 IAC 6.8-1-2]
  - (4) One (1) caustic storage tank, identified as EU-16, constructed in 1990, containing sodium hydroxide, with a maximum capacity of 29,000 gallons. [326 IAC 6.8-1-2]
  - (5) One (1) caustic storage tank, identified as EU-17, constructed in 1986, containing sodium hydroxide, with a maximum capacity of 4,000 gallons. [326 IAC 6.8-1-2]
- (h) One (1) solvent parts cold cleaner, identified as EU-20, constructed in 1996, containing petroleum distillate and using only non-halogenated solvents, with a maximum capacity of 30 gallons. [326 IAC 8-3-2] [326 IAC 8-3-5] [326 IAC 8-3-8]
- (i) One (1) Silane Reactor, identified as EU-24, constructed in 2003, exhausting through stack S/V 24, containing a solution of acid, water, and organosilane component with a maximum capacity of 500 gallons. [326 IAC 6.8-1-2]
- (j) One (1) SYLOJET make-up tank, identified as EU-25, constructed in 2003, exhausting through stack S/V 24, containing a solution of acid, colloidal silica, water, and Silane Reaction Mass, with a maximum capacity of 5500 gallons. [326 IAC 6.8-1-2]

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

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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]

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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)]

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- (a) This permit, T089-19927-00310, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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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]

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

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

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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)]

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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)]

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- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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- (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) A "responsible official" is defined at 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 source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

and

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require 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]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by 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]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and Northwest Regional Office within four (4) daytime business hours after

the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865  
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

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

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

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

The notice fulfills the requirement of 326 IAC 2-7-5(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 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 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]**

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

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

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
- (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

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

- (a) All terms and conditions of permits established prior to T089-19927-00310 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

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 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require 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 determines any of the following:
- (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.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 shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). 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

- (b) A timely renewal application is one that is:
  - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ 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

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)]

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- (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]

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- (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  
  
United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590  
  
in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
  - (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to

326 IAC 2-7-20(b),(c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

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

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- (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 and/or 326 IAC 2-3 (for sources located in NA areas).

**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]**

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

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.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

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

B.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).

#### 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.

#### 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

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]**

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

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

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue

MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by 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 not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

### **Compliance Requirements [326 IAC 2-1.1-11]**

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

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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)]**

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

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

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

The notification which shall be submitted by the Permittee does require the certification by 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]**

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

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale

such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

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

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

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

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

- (b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

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

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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

#### **C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

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

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

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

The response action documents submitted pursuant to this condition do require the certification by 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.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]**

- (a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), the Permittee shall submit by July 1 an emission statement covering the previous calendar year as follows:
  - (1) starting in 2004 and every three (3) years thereafter, and

- (2) any year not already required under (1) if the source emits volatile organic compounds or oxides of nitrogen into the ambient air at levels equal to or greater than twenty-five (25) tons during the previous calendar year.
- (b) The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
  - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

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

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

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- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.
- (c) If there is 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)) 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 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(II)) 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) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); 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.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]  
[326 IAC 2-2][326 IAC 2-3]

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- (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
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit

“calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/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 - General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for 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) and/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  
Air Compliance Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

## **Stratospheric Ozone Protection**

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

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

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

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) Sodium Silicate Furnace, identified as EU-01, fired by natural gas, constructed in 1902, exhausted through stack S/V 01, with a maximum capacity of 9,600 pounds of raw material per hour and 25 million British thermal units per hour.
- (b) Three (3) Stone Johnston Boilers, identified as EU-02, EU-03 and EU-04, fired by natural gas, constructed in March 1986, exhausting through stacks S/V 02, S/V 03 and S/V 04, respectively, with a maximum capacity of 33.5 million British thermal units per hour, each.

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

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

- D.1.1 326 IAC 6.8-2-9 (Particulate Matter Limitations for Lake County - W.R. Grace & Co. (formerly E.I. DuPont))

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Pursuant to 326 IAC 6.8-2-9 (Particulate Matter limitations for Lake County - W.R. Grace (formerly E.I. DuPont) the PM emissions from the one (1) Sodium Silicate Furnace shall not exceed 1.439 lbs. per ton raw material charged, and 6.0 lbs. per hour.

- D.1.2 326 IAC 6.8-8-1 (Lake County: Continuous Compliance Plan)

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Pursuant to 326 IAC 6.8-8-1 (Lake County: Continuous Compliance Plan) a continuous compliance plan (CCP) is required for the one (1) sodium silicate furnace with uncontrolled PM<sub>10</sub> emissions that amount to ten (10) tons per year or more. The source shall comply with the requirements of the CCP submitted on December 10, 1993.

- D.1.3 326 IAC 6.8-6-1 and 326 IAC 6.8-6-5 (Particulate Matter Limitations for Lake County: Combustion Sources; Natural Gas - W.R. Grace & Co. (formerly E.I. DuPont))

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Unit 1 consists of emission units EU-02, EU-03, and EU-04 located in the Powerhouse. The limit stated in the rule applies to each emission unit individually.

Pursuant to 326 IAC 6.8-6-1 and 326 IAC 6.8-6-5 (Particulate Matter Emissions Limitations for Lake County: Combustion Sources; Natural Gas - W.R. Grace & Co. (formerly E.I. DuPont)) each emission unit located in the Powerhouse (EU-02, EU-03, and EU-04) shall only fire natural gas and shall not exceed the PM<sub>10</sub> emission limits of 0.003 lbs. per million British thermal units, and 0.100 lbs. per hour.

- D.1.4 326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Limitations)

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Emission units EU-01, EU-02, EU-03, and EU-04 shall burn natural gas only, therefore, the source will comply with the requirements of 326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Limitations).

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

- D.1.5 Record Keeping Requirement

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The natural gas boiler certification shall be submitted to the address listed in Section C General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or its equivalent, within (30) days after the end of the six (6) month period being reported. The natural gas-fired boiler certification does require the certification by the "Responsible Official" as defined by 326 IAC 2-7-1(34).

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Insignificant Activities

#### Emissions Unit Description:

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

- (a) Back-up generators as follows:
  - (1) One (1) EVC back-up generator, identified as EU-05, fired by natural gas, constructed in 1974, with a maximum capacity of 0.5 million British thermal units per hour.
  - (2) One (1) Powerhouse back-up generator, identified as EU-06, fired by natural gas, constructed in 1971, with a maximum capacity of 0.5 million British thermal units per hour.
- (b) Lime transfer and storage operations, identified as EU-07, constructed in 1972, with a 400 cubic foot storage silo and handled by pneumatic transfer, equipped with filter bags for particulate control, with a maximum throughput of 0.056 ton per hour.
- (c) Sand transfer and storage operations, identified as EU-08, constructed in 1900, with a 20,409 cubic foot storage silo and handled by a bucket elevator, equipped with filter bags for particulate control, with a maximum throughput of 4.2 tons per hour.
- (d) Soda Ash transfer and storage operations, identified as EU-09, constructed in 1900, with a 4,500 cubic foot storage silo and handled by pneumatic transfer, equipped with filter bags for particulate control, with a maximum throughput of 2.2 tons per hour.
- (e) Eight (8) sodium silicate solution storage tanks, identified as EU-10, containing only inorganic chemicals with negligible vapor pressures.
- (f) Nineteen (19) Ludox colloidal silica storage tanks, identified as EU-11, containing organic and inorganic chemicals with negligible vapor pressures.
- (g) The following tanks containing inorganic chemicals with negligible vapor pressures:
  - (1) One (1) sulfuric acid storage tank, identified as EU-13, constructed in 1973, with a maximum capacity of 4,300 gallons.
  - (2) One (1) sulfuric acid storage tank, identified as EU-14, constructed in 1963, with a maximum capacity of 12,000 gallons.
  - (3) Three (3) spent regenerated acid tanks, identified as EU-15, constructed in 1972, containing sulfuric acid, with a maximum capacity of 33,000 gallons, each.
  - (4) One caustic storage tank, identified as EU-16, constructed in 1990, containing 50% sodium hydroxide, with a maximum capacity of 29,000 gallons.
  - (5) One (1) caustic storage tank, identified as EU-17, constructed in 1986, containing sodium hydroxide, with a maximum capacity of 4,000 gallons.

- (h) One (1) Silane Reactor, identified as EU-24, constructed in 2003, exhausting through stack S/V 24, containing a solution of acid, water, and organosilane component with a maximum capacity of 500 gallons.
- (i) One (1) SYLOJET make-up tank, identified as EU-25, constructed in 2003, exhausting through stack S/V 24, containing a solution of acid, colloidal silica, water, and Silane Reaction Mass, with a maximum capacity of 5500 gallons.

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

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

#### **D.2.1 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)**

Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), PM<sub>10</sub> emissions from the following emission units shall not exceed 0.03 grains per dry standard cubic foot:

- (a) One (1) EVC back-up generator, identified as EU-05
- (b) One (1) Powerhouse back-up generator, identified as EU-06
- (c) Lime transfer and storage operations, identified as EU-07
- (d) Sand transfer and storage operations, identified as EU-08
- (e) Soda Ash transfer and storage operations, identified as EU-09
- (f) Eight (8) sodium silicate solution storage tanks, identified as EU-10
- (g) Nineteen (19) Ludox colloidal silica storage tanks, identified as EU-11
- (h) One (1) sulfuric acid storage tank, identified as EU-13
- (i) One (1) sulfuric acid storage tank, identified as EU-14
- (j) Three (3) spent regenerated acid tanks, identified as EU-15
- (k) One (1) caustic storage tank, identified as EU-16
- (l) One (1) caustic storage tank, identified as EU-17
- (m) One (1) Silane Reactor, identified as EU-24
- (n) One (1) SYLOJET make-up tank, identified as EU-25

#### **D.2.2 326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Limitations)**

The two (2) back-up generators (EU-05, and EU-06) shall burn natural gas only, therefore, the source will comply with the requirements of 326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Limitations).

## **Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

### **D.2.3 Particulate Control**

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- (a) In order to comply with Condition D.3.1, the filter bags for PM control shall be in operation at all times when the lime transfer and storage operations, identified as EU-07, sand transfer and storage operations, identified as EU-08, and the soda ash transfer and storage operations, identified as EU-09 are in operation.
  
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

### SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

#### Insignificant Activities

##### Emissions Unit Description:

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

- (a) One (1) solvent parts cold cleaner, identified as EU-20, constructed in 1996, containing petroleum distillate and using only non-halogenated solvents, with a maximum capacity of 30 gallons.

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

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

##### D.3.1 326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements; and
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

##### D.3.2 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

(a) Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
  - (B) The solvent is agitated; or
  - (C) The solvent is heated.

- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) The owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### D.3.3 326 IAC 8-3-8 (Material Requirements for Cold Cleaning Degreasers)

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Pursuant to 326 IAC 8-3-8(c)(2)(B) (Material requirements for Cold Cleaning Degreasers) the Permittee shall not operate a cold cleaning degreaser with a solvent vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

Pursuant to 326 IAC 8-3-8(d)(2) (Material Requirements for Cold Cleaning Degreasers) the source shall maintain each of the following records for each purchase:

- (A) The name and address of the solvent supplier.
- (B) The date of purchase.
- (C) The type of solvent.

- (D) The volume of each unit of solvent.
- (E) The total volume of the solvent.
- (F) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

All records shall be retained on-site for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: W.R. Grace & Co. - Conn.  
Source Address: 5215 Kennedy Avenue, East Chicago, Indiana 46312  
Mailing Address: 5215 Kennedy Ave., East Chicago, IN 46312  
Part 70 Permit No.: T089-19927-00310

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

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: W.R. Grace & Co. - Conn.  
Source Address: 5215 Kennedy Avenue, East Chicago, Indiana 46312  
Mailing Address: 5215 Kennedy Ave., East Chicago, IN 46312  
Part 70 Permit No.: T089-19927-00310

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

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

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

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

**PART 70 OPERATING PERMIT  
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: W.R. Grace & Co. - Conn.  
Source Address: 5215 Kennedy Avenue, East Chicago, Indiana 46312  
Mailing Address: 5215 Kennedy Ave., East Chicago, IN 46312  
Part 70 Permit No.: T089-19927-00310

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

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

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 (and local agency if applicable)**

**PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: W.R. Grace & Co. - Conn.  
 Source Address: 5215 Kennedy Avenue, East Chicago, Indiana 46312  
 Mailing Address: 5215 Kennedy Ave., East Chicago, IN 46312  
 Part 70 Permit No.: T089-19927-00310

**Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_**

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

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

Form Completed By:

Title/Position:

Date:

Phone:

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management**  
Office of Air Quality  
and Northwest Regional Office

Addendum to the Technical Support Document (TSD) for a Part 70 Operating  
Permit

**Source Background and Description**

<b>Source Name:</b>	<b>W.R. Grace &amp; Co. - Conn.</b>
<b>Source Location:</b>	<b>5215 Kennedy Avenue, East Chicago, IN 46312</b>
<b>County:</b>	<b>Lake</b>
<b>SIC Code:</b>	<b>2819</b>
<b>Permit Renewal No.:</b>	<b>T089-19927-00310</b>
<b>Permit Reviewer:</b>	<b>Brandon Snoddy</b>

On October 12, 2007, the Office of Air Quality (OAQ) had a notice published in the Post Tribune in Merrillville and The Times in Munster, IN, stating that W.R. Grace & Co. - Conn. had applied for a Title V Permit Renewal to operate a sodium silicate solution and colloidal silica manufacturing facility. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

No comments were received. Upon further review, IDEM, OAQ has decided to make the following changes to the permit. The changes listed below have been made to permit No. T089-19927-00310. The Table of Contents has been updated. Deleted language appears as ~~struckthroughs~~ and new language appears in **bold**:

1. Unnecessary information in Section A.3 Specifically Regulated Insignificant Activities was removed as follows:
  - (g) The following tanks containing inorganic chemicals with negligible vapor pressures:
    - (1) One (1) sulfuric acid storage tank, identified as EU-13, constructed in 1973, with a maximum capacity of 4,300 gallons. [326 IAC 6.8-1-2]
    - (2) One (1) sulfuric acid storage tank, identified as EU-14, constructed in 1963, with a maximum capacity of 12,000 gallons. [326 IAC 6.8-1-2]
    - (3) Three (3) spent regenerated acid tanks, identified as EU-15, constructed in 1972, containing sulfuric acid, with a maximum capacity of 33,000 gallons, each. [326 IAC 6.8-1-2]
    - (4) One (1) caustic storage tank, identified as EU-16, constructed in 1990, containing ~~50%~~ sodium hydroxide, with a maximum capacity of 29,000 gallons. [326 IAC 6.8-1-2]

2. The following typographical corrections were made to Section D.1.1 & D.1.3

D.1.1 326 IAC 6.8-2-9 (Particulate Matter Limitations for Lake County - W.R. Grace & Co. (formerly E.I. ~~DuPont~~ **DuPont**))

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Pursuant to 326 IAC 6.8-2-9 (Particulate Matter limitations for Lake County - W.R. Grace (formerly E.I. ~~DuPont~~ **DuPont**) the PM emissions from the one (1) Sodium Silicate Furnace shall not exceed 1.439 lbs. per ton raw material charged, and 6.0 lbs. per hour.

D.1.3 326 IAC 6.8-6-1 and 326 IAC 6.8-6-5 (Particulate Matter Limitations for Lake County: Combustion Sources; Natural Gas - W.R. Grace & Co. (formerly E.I. ~~DuPont~~ **DuPont**))

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Unit 1 consists of emission units EU-02, EU-03, and EU-04 located in the ~~Powerhouse~~ **Powerhouse**. The limit stated in the rule applies to each emission unit individually.

Pursuant to 326 IAC 6.8-6-1 and 326 IAC 6.8-6-5 (Particulate Matter Emissions Limitations for Lake County: Combustion Sources; Natural Gas - W.R. Grace & Co. (formerly E.I. ~~DuPont~~ **DuPont**)) each emission unit located in the ~~Powerhouse~~ **Powerhouse** (EU-02, EU-03, and EU-04) shall only fire natural gas and shall not exceed the PM<sub>10</sub> emission limits of 0.003 lbs. per million British thermal units, and 0.100 lbs. per hour.

3. The following typographical correction was made to Section D.2

(h) One (1) Silane Reactor, identified as EU-24, constructed in 2003, exhausting through stack S/V 24, containing a solution of acid, ~~and~~ water, and organosilane component with a maximum capacity of 500 gallons.

4. The following rule cite was added to Section D.2

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

**Indiana Department of Environmental Management**  
Office of Air Quality  
and Northwest Regional Office

Technical Support Document (TSD) for a Part 70 Operating Permit

**Source Background and Description**

<b>Source Name:</b>	<b>W.R. Grace &amp; Co. - Conn.</b>
<b>Source Location:</b>	<b>5215 Kennedy Avenue, East Chicago, IN 46312</b>
<b>County:</b>	<b>Lake</b>
<b>SIC Code:</b>	<b>2819</b>
<b>Permit Renewal No.:</b>	<b>T089-19927-00310</b>
<b>Permit Reviewer:</b>	<b>Brandon Snoddy</b>

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from W.R. Grace & Co. - Conn. relating to the operation of a sodium silicate solution and colloidal silica manufacturing source.

**History**

On December 6, 2004, W.R. Grace & Co. - Conn. submitted an application to the OAQ requesting to change its operating permit classification to Title V from Minor Source Operating Permit (MSOP). W.R. Grace & Co. - Conn. was issued a MSOP on March 30, 2001.

**Permitted Emission Units and Pollution Control Equipment**

- (a) One (1) Sodium Silicate Furnace, identified as EU-01, fired by natural gas, constructed in 1902, exhausted through stack S/V 01, with a maximum capacity of 9,600 pounds of raw material per hour and 25 million British thermal units per hour.
- (b) Three (3) Stone Johnston Boilers, identified as EU-02, EU-03 and EU-04, fired by natural gas, constructed in March 1986, exhausting through stacks S/V 02, S/V 03 and S/V 04, respectively, with a maximum capacity of 33.5 million British thermal units per hour, each.

**Insignificant Activities**

- (a) Back-up generators as follows:
  - (1) One (1) EVC back-up generator, identified as EU-05, fired by natural gas, constructed in 1974, with a maximum capacity of 0.5 million British thermal units per hour.
  - (2) One (1) Powerhouse back-up generator, identified as EU-06, fired by natural gas, constructed in 1971, with a maximum capacity of 0.5 million British thermal units per hour.
- (b) Lime transfer and storage operations, identified as EU-07, constructed in 1972, with a 400 cubic foot storage silo and handled by pneumatic transfer, equipped with filter bags for particulate control, with a maximum throughput of 0.056 ton per hour.
- (c) Sand transfer and storage operations, identified as EU-08, constructed in 1900, with a 20,409 cubic foot storage silo and handled by a bucket elevator, equipped with filter bags for particulate control, with a maximum throughput of 4.2 tons per hour.
- (d) Soda Ash transfer and storage operations, identified as EU-09, constructed in 1900, with a 4,500 cubic foot storage silo and handled by pneumatic transfer, equipped with filter bags for particulate control, with a maximum throughput of 2.2 tons per hour.

- (e) Eight (8) sodium silicate solution storage tanks, identified as EU-10, containing only inorganic chemicals with negligible vapor pressures.
- (f) Nineteen (19) Ludox colloidal silica storage tanks, identified as EU-11, containing organic and inorganic chemicals with negligible vapor pressures.
- (g) One (1) aqua ammonia blowcase, identified as EU-12, constructed in 1976, containing 29% aqua ammonia, with a maximum capacity of 500 gallons.
- (h) The following tanks containing inorganic chemicals with negligible vapor pressures:
  - (1) One (1) sulfuric acid storage tank, identified as EU-13, constructed in 1973, with a maximum capacity of 4,300 gallons.
  - (2) One (1) sulfuric acid storage tank, identified as EU-14, constructed in 1963, with a maximum capacity of 12,000 gallons.
  - (3) Three (3) spent regenerated acid tanks, identified as EU-15, constructed in 1972, containing sulfuric acid, with a maximum capacity of 33,000 gallons, each.
  - (4) One (1) caustic storage tank, identified as EU-16, constructed in 1990, containing sodium hydroxide, with a maximum capacity of 29,000 gallons.
  - (5) One (1) caustic storage tank, identified as EU-17, constructed in 1986, containing sodium hydroxide, with a maximum capacity of 4,000 gallons.
- (i) One (1) boiler feed - oxygen scavenger, identified as EU-18, constructed in 1994, with a maximum capacity of 550 gallons.
- (j) One (1) boiler feed - scale preventative, identified as EU-19, constructed in 1994, with a maximum capacity of 850 gallons.
- (k) One (1) solvent parts cold cleaner, identified as EU-20, constructed in 1996, containing petroleum distillate and using only non-halogenated solvents, with a maximum capacity of 30 gallons.
- (l) One (1) cationic polymer tank, identified as EU-21, constructed in 1972, with a maximum capacity of 4,000 gallons.
- (m) One (1) gasoline storage tank, identified as EU-22, constructed in 1991, with a maximum capacity of 270 gallons.
- (n) One (1) diesel storage tank, identified as EU-23, constructed in 1991, with a maximum capacity of 500 gallons.
- (o) One (1) Silane Reactor, identified as EU-24, constructed in 2003, exhausting through stack S/V 24, containing a solution of acid, water, and organosilane component, with a maximum capacity of 500 gallons.
- (p) One (1) SYLOJET make-up tank, identified as EU-25, constructed in 2003, exhausting through stack S/V 24, containing a solution of acid, colloidal silica, water, and Silane Reaction Mass, with a maximum capacity of 5500 gallons.
- (q) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
- (r) Operations using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.

- (s) Replacement of repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (t) Heat exchanger cleaning and repair.
- (u) Asbestos abatement projects regulated by 326 IAC 14-10
- (v) 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.
- (w) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (x) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (y) A laboratory as defined in 326 IAC 2-7-1(21)(D)

**Existing Approvals**

Since the issuance of the MSOP M089-8847-00310 on March 30, 2001, there have been no additional approvals issued to this source.

**Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S/V 01	Sodium Silicate Furnace	47.58	5.16	52,710	260
S/V 02	Stone Johnson Boiler	31.5	2.08	6,520	381
S/V 03	Stone Johnson Boiler	31.5	2.08	6,520	381
S/V 04	Stone Johnson Boiler	31.5	2.08	6,520	381
S/V 24	Sylojet Process	31	0.25	55	50-100

**Emission Calculations**

See Appendix A of this document for emissions summary sheet (1 of 1).

**County Attainment Status**

The source is located in Lake County

Pollutant	Status
PM <sub>10</sub>	attainment
PM <sub>2.5</sub>	nonattainment
SO <sub>2</sub>	attainment
NOx	attainment
8-hour Ozone	nonattainment
CO	attainment
Lead	attainment

- (a) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake County as nonattainment for PM<sub>2.5</sub>. 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 non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.
- (1) 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 nonattainment new source review. See the State Rule Applicability for the source section.
- (2) 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.
- (c) Lake County has been classified as attainment or unclassifiable in Indiana for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) Fugitive Emissions  
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	45.81
PM <sub>10</sub>	48.32
SO <sub>2</sub>	0.40
VOC	6.98
CO	47.59
NO <sub>x</sub>	273.17
Pb	Less than 10

HAPs	tons/year
Acetaldehyde	Less than 10
Acrolein	Less than 10
Benzene	Less than 10
Cadmium	Less than 10
Chromium	Less than 10
Dichlorobenzene	Less than 10
Ethylene Glycol	Less than 10
Formaldehyde	Less than 10
Hexane	Less than 10
Hydrochloric Acid	Less than 10
Lead	Less than 10
Manganese	Less than 10
Methanol	Less than 10
Nickel	Less than 10
Toluene	Less than 10
Total	Less than 25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of NO<sub>x</sub> is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOCs is less than 25 tons per year and the potential to emit of all other criteria pollutants are less than 100 tons per year.
- (c) Fugitive Emissions  
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are counted toward the determination of Part 70 applicability.

**Actual Emissions**

The following table shows the actual emissions from the source. This information reflects the 2005 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
<b>PM</b>	None Reported
<b>PM<sub>10</sub></b>	22
<b>SO<sub>2</sub></b>	0
<b>VOC</b>	1
<b>CO</b>	17
<b>NO<sub>x</sub></b>	173
<b>HAP (specify)</b>	None Reported

**Part 70 Permit Conditions**

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

**Potential to Emit After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process / Emission Unit	Potential to Emit						
	PM (tons/year)	PM <sub>10</sub> (tons/year)	SO <sub>2</sub> (tons/year)	VOC (tons/year)	CO (tons/year)	NO <sub>x</sub> (tons/year)	HAPS (tons/year)
<b>Sodium Silicate Furnace (EU-01)</b>	26.28	26.28	0.1	0.6	9.2	211.3	0.21
<b>Stone Johnston Boilers (EU-02, EU-03, EU-04)</b>	0.8	3.3	0.3	2.4	37.0	44.0	0.83
<b>Back-up Generators (EU-05, EU-06)</b>	Negligible	Negligible	Negligible	0.52	1.39	17.87	0.30

Process / Emission Unit	Potential to Emit						
	PM (tons/year)	PM <sub>10</sub> (tons/year)	SO <sub>2</sub> (tons/year)	VOC (tons/year)	CO (tons/year)	NO <sub>x</sub> (tons/year)	HAPS (tons/year)
Bulk Material Loading, Transfer, and Storage (EU-07, EU-08, EU-09)	0.36	0.36	-	-	-	-	-
Storage and Transfer of Sodium Silicate (EU-10)	2.44	2.44	-	-	-	-	-
Storage and Transfer of Colloidal Silicate (EU-11)	Negligible	Negligible	-	Negligible	-	-	Negligible
Inorganic Chemical Storage Tanks (EU-12 - EU-19)	Negligible	Negligible	-	-	-	-	-
Organic Chemical Storage Tanks (EU-20 - EU-23)	-	-	-	Negligible	-	-	-
Sylojet Process (EU-24, EU-25)	-	-	-	3.39	-	-	-
<b>Total</b>	<b>29.97</b>	<b>32.47</b>	<b>0.40</b>	<b>6.98</b>	<b>47.59</b>	<b>273.97</b>	<b>1.2</b>

- (a) This existing stationary source is major for PSD because the emissions of NO<sub>x</sub> are greater than one hundred (>100) tons per year, and it is one of the twenty-eight (28) listed source categories.
- (b) This existing stationary source is major for Emission Offset because the emissions of the nonattainment pollutant, NO<sub>x</sub>, are greater than one hundred (>100) tons per year.
- (c) The existing stationary source is not major for nonattainment NSR because the PM10 emissions (as a surrogate for PM2.5) are less than one hundred (<100) tons per year.
- (d) Fugitive Emissions  
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

### Federal Rule Applicability

The following federal rules are applicable to the source:

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to existing 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 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.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Sodium Silicate Furnace (EU-01) NO <sub>x</sub>	PM <sub>10</sub>	N	Y	35.32	26.28	100	N	N
	CO	N	N	9.2	9.2		N	
	NO <sub>x</sub>	N	N	211.3	211.3		N	
Stone Johnston Boilers (EU-02, 03, & 04) NO <sub>x</sub>	PM <sub>10</sub>	N	Y	3.3	3.3	100	N	N
	CO	N	N	37.0	37.0		N	
	NO <sub>x</sub>	N	N	44.0	44.0		N	
Back-up Generators (EU-05, & EU-06) NO <sub>x</sub>	PM <sub>10</sub>	N	Y	4.38E-03	4.38E-03	100	N	N
	CO	N	N	1.39	1.39		N	
	NO <sub>x</sub>	N	N	17.87	17.87		N	
Lime Transfer & Storage Operations (EU-07) PM	PM <sub>10</sub>	Y	Y	1.23	6.15E-02	100	N	N
	CO	N	N	0	0		N	
	NO <sub>x</sub>	N	N	0	0		N	
Sand Transfer & Storage Operations (EU-08)	PM <sub>10</sub>	Y	Y	0.05	2.58E-03	100	N	N
	CO	N	N	0	0		N	
	NO <sub>x</sub>	N	N	0	0		N	
Soda Ash Transfer & Storage Operations (EU-09)	PM <sub>10</sub>	Y	Y	5.88	0.29	100	N	N
	CO	N	N	0	0		N	
	NO <sub>x</sub>	N	N	0	0		N	

If the uncontrolled PM<sub>10</sub> emissions are less than 100 Tons per year, then CAM does not apply to PM<sub>10</sub> or PM.

The insignificant activities have emissions less than Title V applicability level, therefore, CAM does not apply.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the existing units as part of this Part 70 permit.

- (b) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.290, Subpart CC, Standards of Performance for Glass Manufacturing Plants) because the plant is not a glass manufacturing plant. The molten material produced is immediately cooled, solidified, and redissolved in a high pressure autoclave to manufacture sodium silicate solution. The Sodium Silicate Furnace, EU-01, is not subject to 40 CFR 60, Subpart CC - Standards of Performance for Glass Manufacturing Plants for the following reasons:
- (1) The definition for a glass melting furnace, per 40 CFR 60.291, includes refining and conditioning. Molten sodium silicate is not refined or conditioned in this furnace.
  - (2) The operating temperature in this sodium silicate furnace is 2,000 - 3,000°F, which is less than the operating temperature in a glass manufacturing furnace. The firing capacity required by a sodium silicate furnace is lower, therefore, the particulate emissions generated will be lower than those generated in a glass furnace.
  - (3) The production of sodium silicate is specifically categorized under the Standard Industrial Classification (SIC) code 2819, Industrial Inorganic Chemicals not elsewhere classified. SIC code 2819 is not listed in Subpart CC. The SIC codes which are listed in Subpart CC include:
    - 3211: Flat glass production
    - 3221: Container glass production
    - 3229: Pressed and blown glass production
    - 3296: Mineral wool production
  - (4) The furnace does not produce molten glass.
- (c) The source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart Kb) because each storage tank containing volatile material, such as gasoline or diesel fuel, has a capacity less than 75 cubic meters.
- (d) The source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart Dc) because each boiler was constructed prior to June 9, 1989.
- (e) The requirements of the National Emissions Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 63.460, Subpart T) are not applicable to the one (1) solvent parts cold cleaner because it does not use halogenated solvents.
- (f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) 326 IAC 14, and 326 IAC 20 (40 CFR Part 61, and 40 CFR Part 63) included in the permit for this source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-2 (Prevention of Significant Deterioration)**

The source was constructed in 1902, which was before the applicability date of 1977 for PSD, the uncontrolled emissions of one of the attainment pollutants are more than 100 tons per year and is one of the twenty-eight (28) listed source categories, therefore, it is a major source for PSD purposes.

##### **326 IAC 2-3 (Emission Offset)**

The existing source was constructed in 1902. The potential to emit of NO<sub>x</sub> is more than 100 tons per year. Therefore, it is a major source for emission offset for ozone.

326 IAC 2-4.1-1 (New Source Toxics Control)

All emission units at the source were constructed before 1997 except for emission units EU-24, and EU-25. The emission of any single HAP from EU-24 and EU-25 are less than 10 tons per year, each, and the emissions of total HAPs are less than 25 tons per year. Therefore, the requirements of 326 IAC 2-4.1-1, (New Source Toxics Control), are not applicable to the source.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. In accordance with the compliance schedule specified in 326 IAC 2-6-3(a)(1), an emission statement must be submitted annually by July 1 beginning in 2008 and every year after. Therefore, the next emission statement for this source must be submitted by July 1, 2008. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (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 6-10-1 (Lake County: Fugitive Particulate Matter)

The source is located in Lake County and has the potential to emit less than five (5) tons per year of fugitive particulate matter, therefore, the requirements of 326 IAC 6-10-1 (Lake County: Fugitive Particulate Matter) are not applicable to the source.

326 IAC 6.8-11-1 (Lake County: Particulate Matter Contingency Procedures)

The source is located in Lake County and listed in 326 IAC 6.8-2-9 (Particulate Matter Limitations for Lake County - W.R. Grace (formerly E.I. Dupont), therefore, the requirements of 326 IAC 6.8-11-1 (Lake County: Particulate Matter Contingency Procedures) are applicable to the source.

326 IAC 7-1.1-2 (Sulfur Dioxide Emissions Limitations)

All emission units at the source emit less than twenty-five (25) tons per year of SO<sub>2</sub>, therefore, the requirements of 326 IAC 7-1.1-2 (Sulfur Dioxide Emissions Limitations) are not applicable to the source.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emissions Limitations)

All combustion units located at the source burn natural gas only, therefore, the source will comply with the requirements of 326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Limitations).

**State Rule Applicability – Individual Facilities**

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)  
 Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County) the following emission units located at the source shall not exceed the associated PM limitations:

Source	Emission Limit (gr/dscf)
EVC Back-up Generator (EU-05)	0.03
Powerhouse Back-up Generator (EU-06)	0.03
Lime Transfer and Storage (EU-07)	0.03
Sand Transfer and Storage (EU-08)	0.03
Soda Ash Transfer and Storage (EU-09)	0.03
Sodium Silicate Solution Storage Tanks (EU-10)	0.03
Ludox Colloidal silica Storage Tanks (EU-11)	0.03
Sulfuric Acid Storage Tank (EU-13)	0.03
Sulfuric Acid Storage Tank (EU-14)	0.03
Spent Regenerated Acid Tanks (EU-15)	0.03
Caustic Storage Tank (EU-16)	0.03
Caustic Storage Tank (EU-17)	0.03
Silane Reactor (EU-24)	0.03
SYLOJET Make-up Tank (EU-25)	0.03

Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County) the filter bags controlling the lime transfer and storage operations, identified as EU-07, sand transfer and storage operations, identified as EU-08, and soda ash transfer and storage operations, identified as EU-09, shall not allow PM emissions to exceed 0.03 grain per dry standard cubic foot.

326 IAC 6.8-2-9 (Particulate Matter Limitations for Lake County - W.R. Grace (formerly E.I. Dupont)

Pursuant to 326 IAC 6.8-2-9 (Particulate Matter limitations for Lake County - W.R. Grace (formerly E.I. Dupont) the PM emissions from the one (1) Sodium Silicate Furnace shall not exceed the following emission limits:

Source	Emission Limit (lbs/ton of material charged)	Emission Limit (lb/hr)
Sodium Silicate Furnace (EU-01)	1.439	6.0

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

Pursuant to 326 IAC 6.8-8-1 (Lake County: Continuous Compliance Plan) a continuous compliance plan (CCP) is required for the one (1) sodium silicate furnace with uncontrolled PM<sub>10</sub> emissions that amount to ten (10) tons per year or more. The source submitted a CCP for the sodium silicate furnace on December 10, 1993. The CCP meets the requirements of 326 IAC 6.8-8 (Lake County: Continuous Compliance Plan) which outline the requirements for maintaining the CCP and complying with this rule. A CCP is not required for the three (3) Stone Johnston boilers because they can only burn natural gas.

326 IAC 6.8-6-1 and 326 IAC 6.8-6-5 (Particulate Matter Emissions Limitations for Lake County: Combustion Sources; Natural Gas - W.R. Grace & Co. (formerly E.I. Dupont))

Unit 1 consists of emission units EU-02, EU-03, and EU-04 located in the Power house. The limit stated in the rule applies to each emission unit individually.

Pursuant to 326 IAC 6.8-6-1 and 326 IAC 6.8-6-5 (Particulate Matter Emissions Limitations for Lake County: Combustion Sources; Natural Gas - W.R. Grace & Co. (formerly E.I. Dupont)) each emission unit located in the Power house (EU-02, EU-03, and EU-04) shall only fire natural gas and shall not exceed the following PM emission limits:

Source	Emission Limit (lbs/MMBtu)	Emission Limit (lb/hr)
Stone Johnston Boiler (EU-02)	0.003	0.100
Stone Johnston Boiler (EU-03)	0.003	0.100
Stone Johnston Boiler (EU-04)	0.003	0.100

326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements; and
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

- (a) Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control), or cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

- (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
  - (B) The solvent is agitated; or
  - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) The owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

326 IAC 8-3-8 (Material Requirements for Cold Cleaning Degreasers)

Pursuant to 326 IAC 8-3-8(c)(2)(B) (Material requirements for Cold Cleaning Degreasers) the source shall not operate a cold cleaning degreaser with a solvent vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

## **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.

## **Recommendation**

The staff recommends to the Commissioner that the Part 70 Operating Permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 6, 2004.

## **Conclusion**

The operation of this sodium silicate solution and colloidal silica manufacturing plant shall be subject to the conditions of the attached Part 70 Operating Permit No. T089-19927-00310.

**Appendix A: Emissions Calculations  
Calculations Summary**

**Company Name: W.R. Grace & Company - Conn. East Chicago Facility  
Company Address: 5215 Kennedy Ave., East Chicago, IN 46312  
Permit Number: T089-19927-00310  
Reviewer: Brandon Snoddy  
Date: July 25, 2007**

Uncontrolled Potential Emissions							
Emission Unit	PM (tons/year)	PM <sub>10</sub> (tons/year)	SO <sub>2</sub> (tons/year)	VOC (tons/year)	CO (tons/year)	NO <sub>x</sub> (tons/year)	HAPs (tons/year)
Sodium Silicate Furnace (EU-01)	35.32	35.32	0.1	0.6	9.2	211.3	Single <10 tpy
Stone Johnston Boilers (EU-02, EU-03, EU-04)	0.8	3.3	0.3	2.4	37.0	44.0	Single <10 tpy
Back-up Generators (EU-05, EU-06)	3.38E-04	4.38E-03	2.58E-03	0.52	1.39	17.87	Single <10 tpy
Lime Loading, Transfer, and Storage (EU-07)	1.23	1.23	-	-	-	-	-
Sand Loading, Transfer, and Storage (EU-08)	0.05	0.05	-	-	-	-	-
Soda Ash Loading, Transfer, and Storage (EU-09)	5.88	5.88	-	-	-	-	-
Storage and Transfer of Sodium Silicate (EU-10)	2.44	2.44	-	-	-	-	-
Storage and Transfer of Colloidal Silica (EU-11)	0.092	0.092	-	0.0038	-	-	-
Inorganic Chemical Storage Tanks (EU-12 - EU-19)	2.00E-06	2.00E-06	-	-	-	-	Negligible
Organic Chemical Storage Tanks (EU-20 - EU-23)	-	-	-	0.064	-	-	Negligible
Sylojet Process (EU-24, EU-25)	-	-	-	3.39	-	-	Single <10 tpy
<b>Total Uncontrolled Potential Emissions</b>	<b>45.81</b>	<b>48.32</b>	<b>0.40</b>	<b>6.98</b>	<b>47.59</b>	<b>273.17</b>	<b>Single &lt;10 tpy Total &lt; 25 tpy</b>

Process weight rate and the calculations to determine the potential to emit are confidential.

**Appendix A: Emissions Calculations  
Calculations Summary**

**Company Name: W.R. Grace & Company - Conn. East Chicago Facility  
Company Address: 5215 Kennedy Ave., East Chicago, IN 46312  
Permit Number: T089-19927-00310  
Reviewer: Brandon Snoddy  
Date: July 25, 2007**

Limited Potential Emissions							
<b>Emission Unit</b>	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>VOC</b>	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>HAPs</b>
	<b>(tons/year)</b>	<b>(tons/year)</b>	<b>(tons/year)</b>	<b>(tons/year)</b>	<b>(tons/year)</b>	<b>(tons/year)</b>	<b>(tons/year)</b>
Sodium Silicate Furnace (EU-01)	26.28	26.28	0.1	0.6	9.2	211.3	Single <10 tpy
Stone Johnston Boilers (EU-02, EU-03, EU-04)	0.8	3.3	0.3	2.4	37.0	44.0	Single <10 tpy
Back-up Generators (EU-05, EU-06)	3.38E-04	4.38E-03	2.58E-03	0.52	1.39	17.87	Single <10 tpy
Lime Loading, Transfer, and Storage (EU-07)	6.15E-02	6.15E-02	-	-	-	-	-
Sand Loading, Transfer, and Storage (EU-08)	2.58E-03	2.58E-03	-	-	-	-	-
Soda Ash Loading, Transfer, and Storage (EU-09)	0.29	0.29	-	-	-	-	-
Storage and Transfer of Sodium Silicate (EU-10)	2.44	2.44	-	-	-	-	-
Storage and Transfer of Colloidal Silica (EU-11)	0.092	0.092	-	0.0038	-	-	-
Inorganic Chemical Storage Tanks (EU-12 - EU-19)	2.00E-06	2.00E-06	-	-	-	-	Negligible
Organic Chemical Storage Tanks (EU-20 - EU-23)	-	-	-	0.064	-	-	Negligible
Sylojet Process (EU-24, EU-25)	-	-	-	3.39	-	-	Single <10 tpy
<b>Total Limited Potential Emissions</b>	<b>29.97</b>	<b>32.47</b>	<b>0.40</b>	<b>6.98</b>	<b>47.59</b>	<b>273.17</b>	<b>Single &lt;10 tpy Total &lt; 25 tpy</b>

Process weight rate and the calculations to determine the potential to emit are confidential.