



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: November 3, 2011

RE: PQ Corporation / 019-30685-00018

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

## Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

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

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

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

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

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

Enclosures  
FNPER.dot12/03/07



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Jeff Sauffer  
PQ Corporation  
1101 Quartz Rd  
Clarksville, IN 47129

November 3, 2011

Re: 019-30685-00018  
Significant Source Modification to  
Part 70 Renewal No.: T 019-23178-00018

Dear Mr. Sauffer:

PQ Corporation was issued a Part 70 Operating Permit Renewal on September 04, 2008 for a stationary sodium silicate and sodium aluminosilicate manufacturing facility. A letter requesting changes to this permit was received on July 06, 2011. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- Zeolite packaging line with a day silo, to be constructed in 2011, identified as T1710, with a maximum capacity of 5000.00 tons of zeolite per year, using baghouse 1707 as control, and exhausting to stack S-11.

The following construction conditions are applicable to the proposed project:

#### General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13 17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.



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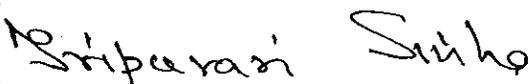
100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

## Significant Source Modification to a Part 70 Source OFFICE OF AIR QUALITY

**PQ Corporation**  
**7th Street and Missouri Avenue,**  
**Jeffersonville, Indiana 47130**

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

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

Significant Source Modification No.: 019-30685-00018	
Issued by:  Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: November 3, 2011

## TABLE OF CONTENTS

<b>A.</b>	<b>SOURCE SUMMARY .....</b>	<b>5</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.</b>	<b>GENERAL CONDITIONS .....</b>	<b>8</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] [IC 13-17-12]	
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	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.16	Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]	
B.17	Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]	
B.18	Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]	
B.19	Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]	
B.20	Source Modification Requirement [326 IAC 2-7-10.5]	
B.21	Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]	
B.22	Transfer of Ownership or Operational Control [326 IAC 2-7-11]	
B.23	Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]	
B.24	Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]	
<b>C.</b>	<b>SOURCE OPERATION CONDITIONS.....</b>	<b>19</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]	

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

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

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

C.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

C.14 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.15 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.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]  
[326 IAC 2-3]

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

**Stratospheric Ozone Protection**

C.18 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 (PM) [326 IAC 6.5-1-2(b)]

D.1.2 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

D.1.3 Particulate Matter (PM) [326 IAC 6.5-2-9]

D.1.4 PSD Minor Limit [326 IAC 2-2]

D.1.5 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1]

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]

D.1.8 Particulate Control [326 IAC 2-7-6(6)]

D.1.9 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4]

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

D.1. Visible Emissions Notations

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

D.1.11 Record Keeping Requirements

D.1.12 Reporting Requirements for Nitrogen Oxides (NO<sub>x</sub>)

**D.2. EMISSIONS UNIT OPERATION CONDITIONS..... 29**

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

D.2.1 PSD Minor Limit [326 IAC 2-2]

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

D.2.3 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

**Compliance Determination Requirements**

D.2.4 Particulate Control [326 IAC 2-7-6(6)]

<b>Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]</b>	
D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)]	
D.2.6 Visible Emissions Notations	
D.2.7 Parametric Monitoring	
D.2.8 Broken or Failed Bag Detection	
<b>Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]</b>	
D.2.9 Record Keeping Requirements	
<b>D.3. EMISSIONS UNIT OPERATION CONDITIONS.....</b>	<b>34</b>
<b>Emission Limitations and Standards [326 IAC 2-7-5(1)]</b>	
D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]	
D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]	
D.3.3 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]	
<b>E.1 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements .....</b>	<b>37</b>
<b>New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]</b>	
E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]	
E.1.2 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc] [326 IAC 12]	
<b>Certification .....</b>	<b>38</b>
<b>Emergency Occurrence Report .....</b>	<b>39</b>
<b>Quarterly Report.....</b>	<b>41</b>
<b>Quarterly Deviation and Compliance Monitoring Report.....</b>	<b>42</b>
<b>Attachment A: Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc]</b>	

## 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 and sodium aluminosilicate manufacturing facility.

Source Address:	1101 Quartz Road, Clarksville, IN 47129
General Source Phone Number:	(812) 288-7186
SIC Code:	2819
County Location:	Clark
Source Location Status:	Nonattainment for PM <sub>2.5</sub> standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and NA NSR 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) Two (2) fire tube boilers (SG-1001 and SG-1002), constructed in 1991, each rated at seventeen and five-tenths (17.5) million British thermal units (MMBtu) per hour and exhausting at one (1) stack, identified as S-2. The boilers are fired by natural gas, No. 2 fuel oil and No. 4 fuel oil or biodiesel as a backup fuel.
- (b) One (1) natural gas-fired dryer, constructed in 1991, rated at ten (10) million British thermal units (MMBtu) per hour and exhausting through a baghouse separator with no unit identification at stack S-6. The dryer uses propane as a backup fuel. This dryer is an insignificant source when burning natural gas.
- (c) One (1) melting furnace with a maximum heat input capacity of 19.7 MMBtu per hour, fired by natural gas or fuel oil, and exhausting at stack S-1. The furnace is fired using natural gas, with No. 2 fuel oil and No. 4 fuel oil as a backup fuel. The furnace was constructed in 1938 and rebuilt in 1998 and 2003 pursuant to Administrative Amendment 019-16660-00018 issued on February 11, 2003.
- (d) Material storage and handling facilities, constructed before August 7, 1977, with a maximum material throughput of 155 tons per hour, including:

- (1) Aluminum trihydrate storage and transfer facilities, with a maximum material throughput of 33.5 tons per hour, consisting of one (1) pneumatic conveyor system equipped with a baghouse with no unit identification exhausting at stack S-3; one (1) 400 ton capacity storage silo equipped with a baghouse with no unit identification exhausting at stack S-4; and one (1) weigh bin with a maximum capacity of 12,580 pounds per hour equipped with a baghouse with no unit identification exhausting at stack S-5.
- (2) Sodium silicate storage and transfer facilities, with a maximum of material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo. Particulate emissions are controlled by a rotoclone and a baghouse with no unit identification for either particulate control device. The rotoclone exhausts to stack R-12. The baghouse exhausts to stack S-12.
- (3) Sand and soda ash storage and transfer facilities, with a total maximum material throughput of 84 tons per hour, consisting of the following:
  - (A) one (1) 1,500 ton capacity storage silo for sand, equipped with one (1) bin vent with a design grain loading of 0.0034 gr/dscf and design airflow rate 277 dscfm, with emissions from the bin vent being exhausted through stack SSBV;
  - (B) one (1) 940 ton capacity storage silo for soda ash, with the emissions from both silos being controlled by one (1) baghouse with no unit identification, with the sand storage emissions not exhausted through stack SSBV and soda ash storage emissions exhausted through stack S-8;
  - (C) two (2) weigh hoppers connected to one (1) baghouse with no unit identification exhausting at stack S-7;
  - (D) one (1) pneumatic conveying system for the transfer of sand and soda ash from the weigh hoppers to the furnace equipped with a baghouse with no unit identification.
- (4) Sodium aluminosilicate transfer, storage, and loading facilities, with a maximum material throughput of 35 tons per hour, consisting of the following:
  - (A) a pneumatic conveyor system for transfer to the storage silos, equipped with one (1) baghouse separator with no unit identification for particulate control exhausting at stack S-6;
  - (B) two (2) 625 ton capacity storage silos each equipped with one (1) baghouse with no unit identification for particulate control exhausting at stacks S-9 and S-10;
  - (C) one (1) pneumatic conveyor system for truck and rail car loading, equipped with a baghouse with no unit identification for particulate control exhausting at stack S-11.

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) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].
- (b) Degreasing operations that do not exceed 145 gallons per 12 months. [326 IAC 8-3-2]  
[326 IAC 8-3-5]
- (c) Other emission units and activities with potential emissions below the threshold in  
326 IAC 2-7-1(21):
  - (1) Aluminum trihydrate unloading operations emitting less than five (5) pounds per  
hour of particulate matter. [326 IAC 6.5-1-2 (a)]
  - (2) Sand and soda ash unloading operations emitting less than five (5) pounds per  
hour of particulate matter. [326 IAC 6.5-1-2 (a)]
  - (3) Sodium Silicate unloading operations emitting less than five (5) pounds per hour  
of particulate matter. [326 IAC 6.5-1-2 (a)]

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]

---

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) The Part 70 Operating Permit Renewal, T019-23178-00018, 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] [IC 13-17-12]

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

- (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and
  - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

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

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

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

and

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

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

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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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, or Southeast Regional Office no later than four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or  
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)  
Facsimile Number: 317-233-6865  
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.

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

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

no later than two (2) working days of the time when emission limitations were exceeded due to the emergency.

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

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

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

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

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

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

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

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

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

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- (a) All terms and conditions of permits established prior to T019-23178-00018 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)]**

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

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

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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.16 Permit Renewal** [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

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- (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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
  - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

- (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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.18 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 or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b),(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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.20 Source Modification Requirement [326 IAC 2-7-10.5]**

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

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

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

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- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

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

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

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

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

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

#### C.1 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

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

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

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

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

- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
  - (A) Asbestos removal or demolition start date;
  - (B) Removal or demolition contractor; or
  - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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 Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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 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.11 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 maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.12 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.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]**

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Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);  
or
  - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;

- (2) review of operation and maintenance procedures and records; and/or
- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

**C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

**C.15 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]**

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

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

**C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]**

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

**C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]**

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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 except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

**Stratospheric Ozone Protection**

**C.18 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 applicable standards for recycling and emissions reduction.

## SECTION D.1

## EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Two (2) fire tube boilers (SG-1001 and SG-1002), constructed in 1991, each rated at seventeen and five-tenths (17.5) million British thermal units (MMBtu) per hour and exhausting at one (1) stack, identified as S-2. The boilers are fired by natural gas, No. 2 fuel oil and No.4 fuel or biodiesel as a back up fuel.
- (b) One (1) natural gas-fired dryer, constructed in 1991, rated at ten (10) million British thermal units (MMBtu) per hour and exhausting through a baghouse separator with no unit identification at stack S-6. The dryer uses propane as a backup fuel.
- (c) One (1) melting furnace with a maximum heat input capacity of 19.7 MMBtu per hour, fired by natural gas or fuel oil, and exhausting at stack S-1. The furnace is fired using natural gas, with No. 2 fuel oil and No. 4 fuel oil as a back up fuel. The furnace was constructed in 1938 and rebuilt in 1998 and 2003 pursuant to Administrative Amendment 019-16660-00018 issued on February 11, 2003.

(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 Particulate Matter (PM) [326 IAC 6.5-1-2(b)]

Pursuant to 326 IAC 6.5-1-2(b)(2) (Nonattainment Area Particulate Limitations for Fossil Fuel Fired Steam Generators; Liquid Fuel) and 326 IAC 6.5-1-2(b)(3) (Nonattainment Area Particulate Limitations for Fossil Fuel Fired Steam Generators; Gaseous Fuel), particulate matter emissions from the boilers (SG-1001 and SG-1002) shall be limited to 0.15 pounds per million Btu heat input when fuel oil is burned and 0.01 grains per dry standard cubic foot when natural gas is burned.

#### D.1.2 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Emission Limitations), the particulate matter emissions from the dryer shall be limited to 0.03 grains per dry standard cubic foot.

#### D.1.3 Particulate Matter (PM) [326 IAC 6.5-2-9]

Pursuant to 326 IAC 6.5-2-9 (PQ Corporation), the particulate matter emissions from the furnace shall be limited to 51.8 tons per year and 1.4 pounds per ton of sodium silicate produced.

#### D.1.4 PSD Minor Limit [326 IAC 2-2]

The input of natural gas to the furnace and furnace natural gas equivalents shall be limited to 180 MMscf per twelve (12) consecutive month period. NO<sub>x</sub> emissions from the furnace shall not exceed 1,091 lbs/MMscf when burning natural gas and 102 lbs/kgal when burning No. 2 fuel oil, No. 4 fuel oil or a blend of No. 2 and No. 4 fuel oils. For purposes of determining compliance:

- (a) Every gallon of No.2 fuel oil, No. 4 fuel oil or combination of No.2 and No. 4 fuel oils burned in the furnace shall be equivalent to 93.5 cubic feet of natural gas based on nitrogen oxides emissions.
- (b) Every standard cubic foot of natural gas burned in either boiler SG-1001 or SG-1002 is equivalent to burning 0.092 standard cubic feet of natural gas in the furnace based on nitrogen oxides emissions.

- (c) Every gallon of No.2 fuel oil, No.4 fuel oil, biodiesel or combination of the fuel oils burned in either boiler SG-1001 or SG-1002 is equivalent to burning 18.33 standard cubic feet of natural gas in the furnace based on nitrogen oxides emissions.
- (d) Every standard cubic foot of natural gas burned in dryer is equivalent to burning 0.092 standard cubic feet of natural gas in the furnace based on nitrogen oxides emissions.

This limit is required to limit the emissions of nitrogen oxides from the entire source to less than one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit will also limit emissions of sulfur oxides to less than one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (PSD) not applicable.

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**D.1.5 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1] [326 IAC 7-2-1]**

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- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the two (2) 17.5 MMBtu/hr oil-fired boilers (SG-1001 and SG-1002) shall not exceed five tenths (0.5) pound per million British thermal units heat input. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations), the SO<sub>2</sub> emissions from the melting furnace shall not exceed five-tenths (0.5) pound per million Btu heat input while combusting fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

**D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan (PMP) is required for each facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

**D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]**

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Not later than 180 days after the initial usage of biodiesel as fuel in boiler SG-100 or SG-1002, the Permittee shall perform a one time stack test, to verify the NOx and SO<sub>2</sub> emission factors used to determine the potential emissions from one of the boilers while combusting biodiesel utilizing methods approved by the commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

**D.1.8 Particulate Control [326 IAC 2-7-6(6)]**

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- (a) In order to ensure compliance with Condition D.1.2 the baghouse (exhausting to Stack S-6) for PM and PM<sub>10</sub> control shall be in operation and control emissions from the dryer at all times that the dryer is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

**D.1.9 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4]**

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Compliance of the two (2) boilers shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two (2) 17.5 MMBtu/hr boilers, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

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

#### **D.1.10 Visible Emissions Notations**

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- (a) In order to demonstrate the compliance status with Conditions D.1.1, D.1.2, and D.1.3, visible emission notations of the boiler stack exhausts (stack S-2), the dryer stack exhausts stack (S-6), and the furnace stack exhaust (stack S-1) shall be performed once per day during normal daylight operations when burning fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

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

### **D.1.11 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (6) below. Note that pursuant to 40 CFR 60 Subpart Dc, the fuel oil sulfur limit applies at all times including periods of startup, shutdown, and malfunction.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel oil and natural gas usage since last compliance determination period and equivalent sulfur dioxide and NO<sub>x</sub> emissions;
  - (3) To certify compliance when burning natural gas only, the Permittee shall maintain records of fuel used; and  
  
If the fuel supplier certification is used to demonstrate compliance when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:
    - (4) Fuel supplier certifications;
    - (5) The name of the fuel supplier; and
    - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document the compliance status with Condition D.1.11, the Permittee shall maintain a daily record of visible emission notations of the boiler stack exhausts (stack S-2) and the furnace stack exhaust (stack S-1) while combusting fuel oil. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

### **D.1.12 Reporting Requirements for Nitrogen Oxides (NO<sub>x</sub>)**

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A quarterly summary of the information to document the compliance status with Condition D.1.4 shall be submitted using the quarterly reporting form located at the end of this permit, or its equivalent, no later than thirty (30) days after the end of each quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee requires a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.2

## EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (d) Material storage and handling facilities, constructed before August 7, 1977, with a maximum material throughput of 155 tons per hour, including:
- (1) Aluminum trihydrate storage and transfer facilities, with a maximum material throughput of 33.5 tons per hour, consisting of one (1) pneumatic conveyor system equipped with a baghouse with no unit identification exhausting at stack S-3; one (1) 400 ton capacity storage silo equipped with a baghouse with no unit identification exhausting at stack S-4; and one (1) weigh bin with a maximum capacity of 12,580 pounds per hour equipped with a baghouse with no unit identification exhausting at stack S-5.
  - (2) Sodium silicate storage and transfer facilities, with a maximum of material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo. Particulate emissions are controlled by a rotoclone and a baghouse with no unit identification for either particulate control device. The rotoclone exhausts to stack R-12. The baghouse exhausts to stack S-12.
  - (3) Sand and soda ash storage and transfer facilities, with a total maximum material throughput of 84 tons per hour, consisting of the following:
    - (A) one (1) 1,500 ton capacity storage silo for sand, equipped with one (1) bin vent with a design grain loading of 0.0034 gr/dscf and design airflow rate 277 dscfm, with emissions from the bin vent being exhausted through stack SSBV;
    - (B) one (1) 940 ton capacity storage silo for soda ash, with the emissions from both silos being controlled by one (1) baghouse with no unit identification, with the sand storage emissions not exhausted through stack SSBV and soda ash storage emissions exhausted through stack S-8;
    - (C) two (2) weigh hoppers connected to one (1) baghouse with no unit identification exhausting at stack S-7;
    - (D) one (1) pneumatic conveying system for the transfer of sand and soda ash from the weigh hoppers to the furnace equipped with a baghouse with no unit identification.
  - (4) Sodium aluminosilicate transfer, storage, and loading facilities, with a maximum material throughput of 35 tons per hour, consisting of the following:
    - (A) a pneumatic conveyor system for transfer to the storage silos, equipped with one (1) baghouse separator with no unit identification for particulate control exhausting at stack S-6;
    - (B) two (2) 625 ton capacity storage silos each equipped with one (1) baghouse with no unit identification for particulate control exhausting at stacks S-9 and S-10;
    - (C) one (1) pneumatic conveyor system for truck and rail car loading, equipped with a baghouse with no unit identification for particulate control exhausting at stack S-11.

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

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

### D.2.1 PSD Minor Limit [326 IAC 2-2]

The Permittee shall be subject to the following PM, PM<sub>10</sub>, PM<sub>2.5</sub> limitations:

Unit	PM Limit (lbs/hr)	PM <sub>10</sub> Limit (lbs/hr)	PM <sub>2.5</sub> Limit (lbs/hr)
S-3 Baghouse	1.06	1.06	1.06
S-12 Baghouse	1.06	1.06	1.06
R-12 Rotoclone	1.06	1.06	1.06
S-8 Baghouse	1.32	1.32	1.32
S-7 Baghouse	1.32	1.32	1.32
S-6 Baghouse	0.55	0.55	0.55
S-11 Baghouse	0.55	0.55	0.55

Compliance with these PM, PM<sub>10</sub>, PM<sub>2.5</sub> emission limits from the storage and handling facilities, in conjunction with the total potential to emit of PM, PM<sub>10</sub>, and PM<sub>2.5</sub> from the rest of the source shall ensure that the source-wide PM, PM<sub>10</sub>, PM<sub>2.5</sub> emissions are less than one hundred (100) tons per twelve consecutive month period, rendering the requirements of 326 IAC 2-2 not applicable to the entire source.

### D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for each facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

### D.2.3 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Emission Limitations), the particulate matter emissions from the aluminum trihydrate storage and transfer facilities; sodium silicate storage and transfer facilities; sand and soda ash transfer facilities; and the sodium aluminosilicate transfer, storage, and loading facilities shall be limited to 0.03 grains per dry standard cubic foot.

## Compliance Determination Requirements

### D.2.4 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to ensure compliance with Condition D.2.1 and D.2.3, the baghouses (exhausting to Stacks S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10 and S-11) for PM and PM<sub>10</sub> control shall be in operation and control emissions from the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate at all times that the sodium silicate or sodium aluminosilicate production facilities are in operation.

In order to ensure compliance with Condition D.2.1 and D.2.3, the baghouse or W-Rotoclone shall operate and control emissions from the storage and conveyance of sodium silicate.”

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

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- (a) In order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM, PM<sub>10</sub> and PM<sub>2.5</sub> testing for the S-7 or S-8 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (b) No later than five years of performing PM, PM<sub>10</sub> and PM<sub>2.5</sub> testing for the S-7 or S-8 baghouse, in order to ensure compliance with Condition D.2.1, the Permittee shall perform PM, PM<sub>10</sub> and PM<sub>2.5</sub> testing for the S-6 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (c) No later than five years of performing PM, PM<sub>10</sub> and PM<sub>2.5</sub> testing for the S-6 baghouse, in order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM, PM<sub>10</sub> and PM<sub>2.5</sub> testing for the S-3 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (d) No later than five years of performing PM, PM<sub>10</sub> and PM<sub>2.5</sub> testing for the S-3 baghouse, in order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM, PM<sub>10</sub> and PM<sub>2.5</sub> testing for the S-11 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (e) No later than one hundred eighty (180) days of operation of the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, in order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM/PM<sub>10</sub>/PM<sub>2.5</sub> testing from the Rotoclone and establish the a minimum flow rate (in gallons per minute (GPM)) across the rotoclone. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration.
- (f) No later than one hundred eighty (180) days after the issuance of this permit, SSM 019-30685-00018, in order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM/PM<sub>10</sub>/PM<sub>2.5</sub> testing for the S-12 baghouse utilizing methods as approved by the commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). -Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration.

Section C – Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

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

##### D.2.6 Visible Emissions Notations

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- (a) To demonstrate the compliance status with Condition D.2.3, daily visible emission notations of stack exhausts S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, and S-11, shall be performed day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

In the event that the W-Rotoclone is not operating, a trained employee shall record whether the emissions are normal or abnormal from stack S-12.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

#### D.2.7 Parametric Monitoring

- (a) To demonstrate the compliance status with Condition D.2.4, the Permittee shall record the pressure drop across the baghouses used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the most recent valid compliance demonstration, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit.
- (b) The Permittee shall record the flow rate across the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the flow rate across the rotoclone is below 4.0 gallons per minute (GPM), or the minimum flow rate established during the most recent valid compliance demonstration, the Permittee shall take reasonable response steps. A flow rate that is below the above mentioned minimum is not a deviation from this permit.
- (c) Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.
- (d) The instruments used for determining the pressure and flow rate shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.2.8 Broken or Failed Bag Detection

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- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

#### D.2.9 Record Keeping Requirements

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- (a) To document the compliance status with Condition D.2.6, the Permittee shall maintain daily records of visible emission notations of the exhaust from stacks S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11 and S-12 (when the Rotoclone is not operating) once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).
- (b) To document the compliance status with Condition D.2.7, the Permittee shall maintain records once per day of the flow rate of water across the rotoclone and the pressure drop across the baghouse (when the Rotoclone is not in operation) used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate. The Permittee shall include in its daily record when a flow rate or a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day.)
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

## SECTION D.3

## EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Degreasing operations not exceeding 145 gallons per 12 months. [326 IAC 8-3-2]  
[326 IAC 8-3-5]
- (b) Material unloading operations, including:
  - (1) Aluminum trihydrate unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]
  - (2) Sand and soda ash unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]
  - (3) Sodium Silicate unloading operations emitting less than five (5) pounds per hour of particulate matter. [326 IAC 6.5-1-2 (a)]

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

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

#### D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations existing as of January 1, 1980, located in Clark County and which have potential emissions of one hundred (100) tons or greater per year, the owner or operator 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;
- (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 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility without remote solvent reservoirs, existing as of January 1, 1980, located in Clark, Elkhart, Floyd, Lake, Marion, Porters, or St. Joseph Counties, 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 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 the 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 and 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, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon absorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 325 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility, existing as of July 1, 1990, shall ensure 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 Particulate Matter (PM) [326 IAC 6.5-1-2(a)]**

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Pursuant to 326 IAC 6.5-1-2(a) (Particulate Emission Limitations), the particulate matter emissions from the unloading of aluminum trihydrate, sand, soda ash, and sodium silicate shall be limited to 0.03 grains per dry standard cubic foot.

## **SECTION E.1 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements**

### **Emission Unit Description:**

- (a) Two (2) fire tube boilers (SG-1001 and SG-1002), constructed in 1991, each rated at seventeen and five-tenths (17.5) million British thermal units (MMBtu) per hour and exhausting at one (1) stack, identified as S-2. The boilers are fired by natural gas, No. 2 fuel oil and No.4 fuel or biodiesel as a back up fuel.

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

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

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

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Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for boilers SG-1001 and SG-1002, except as otherwise specified in 40 CFR Part 60, Subpart Dc.

#### **E.1.2 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Dc] [326 IAC 12]**

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Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units, which are incorporated by reference as 326 IAC 12, and included as Attachment A, for boilers SG-1001 and SG-1002 as specified as follows:

- (a) 40 CFR 60.40c
- (b) 40 CFR 60.41c
- (c) 40 CFR 60.42c (d), (h)(1), (2), (i), (j)
- (d) 40 CFR 60.43c (d), (e)
- (e) 40 CFR 60.44c
- (f) 40 CFR 60.45c
- (g) 40 CFR 60.46c
- (h) 40 CFR 60.47c
- (i) 40 CFR 60.48c
- (j) 40 CFR 60.48c

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### PART 70 OPERATING PERMIT CERTIFICATION

Source Name: PQ Corporation  
Source Address: 1101 Quartz Road, Clarksville, IN 47129  
Part 70 Permit No.: T019-23178-00018

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: PQ Corporation  
Source Address: 1101 Quartz Road, Clarksville, IN 47129  
Part 70 Permit No.: T019-23178-00018

**This form consists of 2 pages**

**Page 1 of 2**

<input type="checkbox"/>	This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), no later than four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and</li><li>• The Permittee must submit notice in writing or by facsimile no later than two (2) days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.</li></ul>
--------------------------	--

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

Form Completed By: \_\_\_\_\_

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

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

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**Part 70 Quarterly Report**

Source Name: PQ Corporation  
Source Address: 1101 Quartz Road, Clarksville, IN 47129  
Part 70 Permit No.: T019-23178-00018  
Facility: Melting Furnace exhausting at S-1, Boilers SG-1001 & SG-1002, and Natural Gas Dryer exhausting at S-6  
Parameter: NO<sub>x</sub>  
Limit: 180 MMCF of natural gas (or fuel oil equivalent) per twelve (12) consecutive month period.

YEAR: \_\_\_\_\_

Month	Fuel Usage for This Month (gallons)	Fuel Usage for Previous 11 Months (gallons)	Fuel Usage for 12-Month Period (gallons)

- No deviation occurred in this quarter.
- Deviations occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted By: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

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

Source Name: PQ Corporation  
Source Address: 1101 Quartz Road, Clarksville, IN 47129  
Part 70 Permit No.: T019-23178-00018

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

Page 1 of 2

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

<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</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>	

Form Completed By: \_\_\_\_\_

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

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

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

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

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

**Source Description and Location**

Source Name: PQ Corporation  
 Source Location: 7th Street and Missouri Avenue,  
 Jeffersonville, Indiana 47130  
 County: Clark  
 SIC Code: 2819  
 Operation Permit Renewal No.: T 019-23178-00018  
 Issuance Date: September 4, 2008  
 Significant Source Modification No.: 019-30685-00018  
 Significant Permit Modification No.: 019-30719-00018  
 Permit Reviewer: Ghassan Shalabi

**Existing Approvals**

The source was issued Part 70 Operating Permit No. 019-23178-00018 on September 04, 2008. The source has since received the following approval:

Significant Permit Modification No. 019-29779-00018, issued on 06/02/2011.

**County Attainment Status**

The source is located in Clark County.

<b>Table 1: County Attainment Status</b>	
<b>Pollutant</b>	<b>Designation</b>
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM <sub>2.5</sub> .	

- (a) **Ozone Standards**  
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Clark County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM<sub>2.5</sub>**

Clark County has been classified as nonattainment for PM<sub>2.5</sub> in 70 FR 943 dated January 5, 2005. On May 8<sup>th</sup>, 2008, U.S. EPA promulgated specific New Source Review rules for PM<sub>2.5</sub> emissions, and the effective date of these rules was July 15<sup>th</sup>, 2008. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

- (c) Clark County has been classified as attainment or unclassifiable for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Since this source is classified as a chemical process plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) Fugitive Emissions  
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.

<b>Source Status</b>
----------------------

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

Pollutant	Emissions (ton/yr)
PM	59.35
PM <sub>10</sub>	59.01
PM <sub>2.5</sub>	58.84
SO <sub>2</sub>	<100
VOC	3.61
CO	15.18
NO <sub>x</sub>	<100
GHGs	45,030
HAPs	Negligible
Total HAPs	Negligible

\*NO<sub>x</sub> emissions from the boilers, dryer and the furnace are limited to less than 98 tons per year.  
 \*\* Compliance with the NO<sub>x</sub> emission limits will also limit the SO<sub>2</sub> emissions to less than 100 tons per year.

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant, excluding GHGs, is emitted at a rate of one hundred (100) tons per year or more, emissions of GHGs are less than one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per year, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is not a major stationary source under Nonattainment New Source Review (326 IAC 2-1.1-5) because PM<sub>2.5</sub> is not emitted at a rate of 100 tons per year or more.
- (c) These emissions are based upon Part 70 Operating Permit Renewal No. T 019-23178-00018, issued on September 4, 2008 and Significant Permit Modification No. 019-23535-00018, issued on June 02, 2011.

This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25)

tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

#### Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by PQ Corporation on 07/06/2011, relating to installing a new zeolite packaging line with a day silo and amending conditions D.1.5(f) and D.2.9(b). The following is a list of the proposed emission unit and pollution control device:

Zeolite packaging line with a day silo, to be constructed in 2011, identified as T1710, with a maximum capacity of 5000.00 tons of zeolite, using baghouse 1707 as control, and exhausting to stack S-11.

#### Enforcement Issues

There are no pending enforcement actions.

#### Emission Calculations

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

#### Permit Level Determination – Part 70

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

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

PTE Before Controls of the Modification	
Pollutant	Potential To Emit (ton/yr)
PM	56.94
PM <sub>10</sub>	56.94
PM <sub>2.5</sub>	0
SO <sub>2</sub>	0
VOC	0
CO	0
NO <sub>x</sub>	0
Single HAPs	<10
Total HAPs	<25

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

This source modification is subject to 326 IAC 2-7-10.5(f)(4) because the potential to emit PM and PM10 is greater than twenty-five 25 tons per year before control. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because it involves case-by-case determination of emission limitations and requires significant changes to existing monitoring and record keeping requirements.

**Permit Level Determination – PSD**

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 source modification, 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 (ton/yr)							
	PM	PM <sub>10</sub>	PM <sub>2.5</sub> *	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	GHGs
Total for Modification	0.57	0.57	0	0	0	0	0	0
Source Wide PTE Before Mod.	59.35	59.01	58.83	<100	3.61	15.18	<100	45,030
Source Wide PTE After Mod.	59.92	59.58	58.83	<100	3.61	15.18	<100	45,030
PSD Major Source Thresholds	100	100		100	100	100	100	100,000 CO <sub>2e</sub>
Nonattainment NSR			100					

\*PM<sub>2.5</sub> listed is direct PM<sub>2.5</sub>.

- (1) This modification to an existing minor stationary source for PSD is not major because the source wide emissions of all regulated pollutants are still less than the PSD major source threshold. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (2) This modification to an existing minor stationary source for NA NSR is not major because the source wide emissions of direct PM<sub>2.5</sub> are less than the NA NSR major source threshold. Therefore, pursuant to 326 IAC 2-1.1-5 Nonattainment NSR requirements do not apply.

**Federal Rule Applicability Determination**

- (a) 40 CFR 64.2, Compliance Assurance Monitoring (CAM)  
 40 CFR 64.2 does not apply to the Zeolite packaging line because it does not have the potential to emit before control equal to or greater than the major source threshold
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 61, 40 CFR Part 63) applicable to this source.
- (c) This source is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63, Subpart T (National Emissions Standards for Halogenated Solvent Cleaning) (326 IAC 14), because this source does not use halogenated solvents.

**State Rule Applicability Determination**

326 IAC 2-3 (Emission Offset)  
 Clark County has been classified as nonattainment for PM<sub>2.5</sub> in 70 FR 943 dated January 5, 2005. The limited PM<sub>2.5</sub> emissions are less than 100 tons per year. Therefore, the source is not major source for PM<sub>2.5</sub>.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
 Pursuant to 326 IAC 6-3-1 (c), 326 IAC 6-3-2 does not apply if a particulate matter

limitation established in 326 IAC 6.5 is more stringent.

**326 IAC 6.5 (Particulate Matter Limitations Except Lake County)**

This source is located in Clark County and has the potential to emit one hundred (100) tons or more of particulate matter per year. Therefore, 326 IAC 6.5-1-2 applies.

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Emission Limitations), the particulate matter emissions from the Zeolite packaging line shall be limited to 0.03 grains per dry standard cubic foot.

**Compliance Determination and Monitoring Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

**Compliance Determination Requirements**

There are no changes to the Compliance Determination Requirements as a result of this modification.

**Compliance Monitoring Requirements**

There are no changes to the Compliance Monitoring Requirements as a result of this modification.

**Proposed Changes**

The changes listed below have been made to Part 70 Operating Permit No. 019-23178-00018. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

**Change No. 1:** The descriptive information in Section D.2 is changed as follows:

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

**Emissions Unit Description:**

...

- (e) **Zeolite packaging line with a day silo, to be constructed in 2011, identified as T1710, with a maximum capacity of 5000.00 tons of zeolite per year, using baghouse 1707 as control, and exhausting to stack S-11.**

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

**Change No. 2:** The emergency provisions requirements have been clarified as follows:

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

---

(a) (b) ...

(1) - (3) ...

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Southeast Regional Office ~~within~~ **no later than** four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

...

(5) ...

~~within~~ **no later than** 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:

...

**Change No. 3:** IDEM decided to make the following changes to the Record Keeping and Reporting conditions throughout Section D of the permit:

To document **the** compliance **status** with \_\_\_\_\_, the Permittee shall ...

**Change No. 4:** IDEM decided make the following changes to the Testing conditions in Section D of the permit:

In order to demonstrate **the** compliance **status** with...

**Change No. 5:** Pursuant to 326 IAC 10-4-16 (a), Sections 1 through 15 of the rule shall not apply to any control period in 2009 or thereafter. Therefore, Conditions D.1.5 is deleted as follows:

~~D.1.5 Nitrogen Oxides (NO<sub>x</sub>) [326 IAC 10-1]~~

---

~~Pursuant to 326 IAC 10-1, the Permittee shall install, operate and maintain the following Best Available Control Technology (BACT):~~

~~(a) Reduce the amount of excess air in the flame zone of the burners by sealing the burners and furnace box to prevent infiltration of excess air.~~

~~(b) Use long luminous flames to reduce the peak flame temperature and gas residence time at peak temperatures.~~

~~(c) Determine the flame pattern that provides optimal conditions for minimizing NO<sub>x</sub> emissions.~~

- ~~(d) The Permittee shall monitor the flame pattern using visual inspections and make necessary adjustments to maintain low NO<sub>x</sub> emissions. The flame patterns will be observed by a trained employee at least once per day when the furnace is in normal operation. A trained employee is an employee who has worked at the plant for at least one month and has been trained in the appearance and characteristics of a normal flame pattern. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions or Exceedances, shall be considered a deviation from this permit.~~
- ~~(e) The Permittee shall conduct visual inspections of the furnace to ensure integrity of the box and minimize air infiltration. Inspections shall be conducted at least three (3) times each month when the furnace is in operation.~~
- ~~(f) During normal operation of the furnace, the Permittee shall maintain the crown temperature and oxygen levels in the furnace as follows:~~

<del>Fuel</del>	<del>Crown Temperature Range (°F)</del>	<del>Excess Oxygen Range (%)</del>
<del>Natural Gas</del>	<del>2200 - 2800</del>	<del>0 - 2.0</del>
<del>Fuel Oil</del>	<del>2200 - 2800</del>	<del>0 - 2.0</del>

~~The Permittee shall monitor and record the crown temperature and excess oxygen levels at least once per day when the furnace is operating normally.~~

- ~~(g) The NO<sub>x</sub> emissions from the furnace shall not exceed 1,091 lbs/MMscf when burning natural gas and 102 lbs/kgal when burning No. 2 fuel oil, No. 4 fuel oil or a blend of No. 2 and No. 4 fuel oils. These emission limits are necessary to achieve the 40% reduction in NO<sub>x</sub> emissions as required by 326 IAC 10-1.~~

**Change No.6:** To be consistent with the Parametric Monitoring requirements in condition D.2.7, Condition D.2.9 is changed as follows:

**D.2.9 Record Keeping Requirements**

- (a) To document the compliance status with Condition D.2.6, the Permittee shall maintain daily records of visible emission notations of the exhaust from stacks S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11 and S-12 **(when the Rotoclone is not operating)** once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).
- (b) To document the compliance status with Condition D.2.7, the Permittee shall maintain records once per day of the ~~pressure drop~~ **flow rate of water** across the rotoclone and **pressure drop across the** baghouses **(when the Rotoclone is not operating)** used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate. The Permittee shall include in its daily record when a **flow rate or a** pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day.)

...

**Change No.7:** To correct the source status, A.1 is changed as follows:

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

---

The Permittee owns and operates a stationary sodium silicate and sodium aluminosilicate manufacturing facility.

...

Source Status: Part 70 Operating Permit Program  
Major ~~Minor~~ Source, under PSD Rules  
Minor Source, Section 112 of the Clean Air Act  
1 of 28 Source Categories

**Change No. 8:** PQ Corporation is a minor source under PSD. Therefore, IDEM is removing references to 326 IAC 2-2 and 326 IAC 2-3 from conditions C.16 and C.17:

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [~~326 IAC 2-2~~  
~~326 IAC 2-3~~]

---

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

~~(d) — If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:~~

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

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

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] ~~[326 IAC 2-2]~~

(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 except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

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

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

- (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).~~
- (f) ~~— The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:~~
- (1) ~~— The name, address, and telephone number of the major stationary source.~~
- (2) ~~— The annual emissions calculated in accordance with (d)(1) and (2) in Section C – General Record Keeping Requirements.~~
- (3) ~~— The emissions calculated under the actual to projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).~~
- (4) ~~— Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.~~

Reports required in this part shall be submitted to:

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

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

**Change No. 9:** To correct the Stacks ID and to avoid redundancy, condition D.1.4 is modified as follows:

**D.1.4 PSD Minor Limit [326 IAC 2-2]**

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Emissions of nitrogen oxides from the melting furnace exhausting at S-1, boilers SG-1001 and SG-1002, and the natural gas dryer exhausting at S-6 shall be limited to ninety-eight (98) tons per twelve (12) consecutive month period. The input of natural gas to the furnace and furnace natural gas equivalents shall be limited to 180 MMscf per twelve (12) consecutive month period. NO<sub>x</sub> emissions from the furnace shall not exceed 1,091 lbs/MMscf when burning natural gas and 102 lbs/kgal when burning No. 2 fuel oil, No. 4 fuel oil or a blend of No. 2 and No. 4 fuel oils. For purposes of determining compliance:

**Change No. 10:** IDEM, OAQ has decided to clarify Section D.1 - Testing Requirements. Condition D.1.7 is modified as follows:

**D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]**

---

During the period between 60 and 180 days after initial usage of biodiesel as a fuel in boiler SG-1001 or SG-1002, the Permittee shall perform a one time stack test, to verify the NO<sub>x</sub> and SO<sub>2</sub> emission factors used to determine the potential emissions from one of the boilers while combusting biodiesel, utilizing methods as approved by the Commissioner. Section C – Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

**Not later than 180 days after the initial usage of biodiesel as fuel in boiler SG-100 or SG-1002, the Permittee shall perform a one time stack test, to verify the NOx and SO2 emission factors used to determine the potential emissions from one of the boilers while combusting biodiesel utilizing methods approved by the commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.**

**Change No. 11:** IDEM has decided to clarify Condition D.1.8 as follows:

**D.1.8 Particulate Control [326 IAC 2-7-6(6)]**

- (a)** In order to **ensure compliance** ~~comply~~ with Condition D.1.2 the baghouse (exhausting to Stack S-6) for PM and PM<sub>10</sub> control shall be in operation and control emissions from the dryer at all times that the dryer is 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.**

**Change No. 12:** IDEM decided to change condition D.1.10 as follows:

**D.1.10 Visible Emissions Notations**

- (a)** **In order to demonstrate the compliance status with Conditions D.1.1, D.1.2, and D.1.3, ~~visible~~ emission notations of the boiler stack exhausts (stack S-2), the dryer stack exhausts stack (S-6), and the furnace stack exhaust (stack S-1) shall be performed once per day during normal daylight operations when burning fuel oil. A trained employee shall record whether emissions are normal or abnormal.**

...

**Change No. 13:** In order to include PM<sub>2.5</sub> limits, Conditions D.2.1 and D.2.5 are changed as follows:

**D.2.1 PSD Minor Limit [326 IAC 2-2]**

The Permittee shall be subject to the following PM, ~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> limitations:

Unit	PM Limit (lbs/hr)	PM <sub>10</sub> Limit (lbs/hr)	PM <sub>2.5</sub> Limit (lbs/hr)
S-3 Baghouse	1.06	1.06	<b>1.06</b>
S-12 Baghouse	1.06	1.06	<b>1.06</b>
<b>R-12 Rotoclone</b>	<b>1.06</b>	<b>1.06</b>	<b>1.06</b>
S-8 Baghouse	1.32	1.32	<b>1.32</b>
S-7 Baghouse	1.32	1.32	<b>1.32</b>
S-6 Baghouse	0.55	0.55	<b>0.55</b>
S-11 Baghouse	0.55	0.55	<b>0.55</b>

Compliance with these PM, ~~and~~ PM<sub>10</sub>, **and** PM<sub>2.5</sub> emission limits from the storage and handling facilities, in conjunction with the total potential to emit of PM, ~~and~~ PM<sub>10</sub>, **and** PM<sub>2.5</sub> from the rest of the source ~~including emissions from material handling, paved roads, and unpaved roads,~~ shall ensure that the source-wide PM, ~~and~~ PM<sub>10</sub>, **and** PM<sub>2.5</sub> emissions are less than one hundred (100) tons per twelve consecutive month period, rendering the requirements of 326 IAC 2-2 not applicable **to the entire source.**

#### D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)]

- (a) In order to demonstrate **the compliance status** with Condition D.2.1, the Permittee shall perform PM,~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> testing for the S-7 or S-8 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (b) ~~Within~~ **No later than** five years of performing PM,~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> testing for the S-7 or S-8 baghouse, in order to demonstrate **the compliance status** with Condition D.2.1, the Permittee shall perform PM,~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> testing for the S-6 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (c) ~~Within~~ **No later than** five years of performing PM,~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> testing for the S-6 baghouse, in order to demonstrate **the compliance status** with Condition D.2.1, the Permittee shall perform PM,~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> testing for the S-3 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (d) ~~Within~~ **No later than** five years of performing PM,~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> testing for the S-3 baghouse, in order to demonstrate **the compliance status** with Condition D.2.1, the Permittee shall perform PM,~~and~~ PM<sub>10</sub> **and** PM<sub>2.5</sub> testing for the S-11 baghouse utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.
- (e) ~~Within~~ **No later than** one hundred eighty (180) days of operation of the rotoclone used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, in order to demonstrate **the compliance status** with Condition D.2.1, the Permittee shall perform **PM/PM10/PM2.5** testing **from the Rotoclone and** establish the a minimum flow rate (in gallons per minute (GPM)) across the rotoclone. **This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration.**
- (f) **No later than one hundred eighty (180) days after the issuance of this permit, SSM 019-30685-00018, in order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM/PM10/PM2.5 testing for the S-12 baghouse utilizing methods as approved by the commissioner. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. This testing shall be repeated at least once every twenty (20) years from the date of the most recent valid compliance demonstration.**

Section C – Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

**Change No. 14:** IDEM decided to change conditions D.2.4, D.2.6 and D.2.7 as follows:

#### D.2.4 Particulate Control [326 IAC 2-7-6(6)]

- (a) In order to ~~comply~~ **ensure compliance** with Condition D.2.1 and D.2.3, the baghouses (exhausting to Stacks S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, ~~and~~ S-11 ~~and~~ S-12) for PM and PM<sub>10</sub> control shall be in operation and control emissions from the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate at all times that the sodium silicate or sodium aluminosilicate production facilities are in operation.

In order to ensure compliance with Condition D.2.1 and D.2.3, the baghouse or W-Rotoclone shall operate and control emissions from the storage and conveyance of sodium silicate."

- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification

#### D.2.6 Visible Emissions Notations

- (a) **To demonstrate the compliance status with Condition D.2.3,** Daily visible emission notations of stack exhausts S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, **and S-11, ~~S-12, and R-12,~~** shall be performed day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

**In the event that the W-Rotoclone is not operating, a trained employee shall record whether the emissions are normal or abnormal from stack S-12.**

...

#### D.2.7 Parametric Monitoring

- (a) **To demonstrate the compliance status with Condition D.2.4,** The Permittee shall record the pressure drop across the baghouses used in conjunction with the storage and conveyance of sand, soda ash, aluminum trihydrate, sodium silicate, and sodium aluminosilicate, at least once per day when the material storage and conveyance systems are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the most recent valid compliance demonstration, the Permittee shall take reasonable response steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit.

...

### Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 019-30685-00018 and Significant Permit Modification. The staff recommend to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

### IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ghassan Shalabi at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5378 or toll free at 1-800-451-6027 extension 4-5378.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

## Appendix A: Emissions Calculations

### Unloading from Day Bin to Sacs

**Company Name:** PQ Corporation  
**Address City IN Zip:** 1101 Quartz Rd, Clarksville, IN 47129  
**Permit Number:** 30685  
**Plt ID:** 019-00018  
**Reviewer:** Ghassan Shalabi  
**Date:** 8/1/2011

PM/PM10 EF lb/ton of product	Max Capacity lb product/hr	Max Capacity ton product/yr	uncontrolled PM/PM10 emissions tpy	Control Efficiency %	PM/PM10 emission after control tpy
5.2	5000	21900	56.94	99	0.5694

### Methodology

EF = Emission Factor for the proposed zeolite packaging is assumed to be equivalent to the storage/loading and unloading of soda ash, EPAs AP-42, Section 8.12, Table 8.12-3.

PM is assumed to be equal to PM<sub>10</sub>

It is expected that there will be no PM<sub>2.5</sub> emissions because the zeolite particle distribution is between 3 - 5 micrometer

Emissions (tons/yr) = Amount of material loaded (tons/yr) x EF (lb/ton) / 2000 (lb/ton)

**Appendix A: Emissions Calculations**

**Source Wide PTE**

**Company Name:** PQ Corporation  
**Address City IN Zip:** 1101 Quartz Rd, Clarksville, IN 47129  
**Permit Number:** 30685  
**Plt ID:** 019-00018  
**Reviewer:** Ghassan Shalabi  
**Date:** 8/1/2011

Limited Potential to Emit

Emission Units	PM10 (TPY)	PM (TPY)	SO2 (TPY)	Nox (TPY)	VOC (TPY)	CO (TPY)
Melting Furnace	23.7	25.1	<100	<98	3	6
Two 17.5 MMBtu/hr Boilers	9.1	7.7	0	0	0.37	5.5
Dryer	0.33	0.08	0	0	0.24	3.68
Sand and Soda Ash (S-7 & S-8)	11.56	11.56	0	0	0	0
Aluminum Trihydrate (S-3)	4.64	4.64	0	0	0	0
Sodium Aluminosilicate (S-6 & S-11)	4.84	4.84	0	0	0	0
Sodium Silicate (S-12)	4.64	4.64	0	0	0	0
<b>Total (Limited)</b>	<b>58.81</b>	<b>58.56</b>	<b>&lt;100</b>	<b>&lt;100</b>	<b>3.61</b>	<b>15.18</b>

	<b>Controlled PTE of PM, tons/yr</b>	<b>Controlled PTE of PM<sub>10</sub>, tons/yr</b>	<b>Controlled PTE of PM<sub>2.5</sub>, tons/yr</b>
Handling	0.005	0.005	0
Unpaved Roads	0.710	0.180	0.020
Paved Roads	0.070	0.010	0
SubTotal =	0.785	0.195	0.020

Emission Limit (tpy):	59.35	59.01	58.83
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Emission of Melting Furnace, the 2 boilers, and the dryer were taken from Part 70 Operating Permit Renewal No. T 019 23178 00018  
 All other emissions were taken from SPM 019-29779-00018 Appendix A (New Baghouse Emission Limits)

**Appendix A: Emissions Calculations**

**GHG Emissions Summary**

**Company Name:** PQ Corporation  
**Address City IN Zip:** 1101 Quartz Rd, Clarksville, IN 47129  
**Permit Number:** 30685  
**Pit ID:** 019-00018  
**Reviewer:** Ghassan Shalabi  
**Date:** 8/1/2011

<b>Unit</b>	<b>CO2e tpy</b>
2 NG Boiler	18,508
2 #2FO Boiler	23,636
2 #4FOBoiler	25,429
NG Dryer	5,288
NG melting furnace	10,417
#4 melting furnace	14,313
#2 melting furnace	13,304
<b>Worst Case Total GHG</b>	<b>45,030</b>

**Appendix A: Emissions Calculations**

**2 NG Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	mmBtu	MMCF/yr
	mmscf	
35.0	1000	306.6

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tc	0.3	1.2	1.2	0.1	15.3	0.8	12.9

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 10

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-0

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000,000 Btu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000

See page 4 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**2 NG Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**HAPs Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/V	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tc	3.219E-04	1.840E-04	1.150E-02	2.759E-01	5.212E-04

HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/V	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tc	7.665E-05	1.686E-04	2.146E-04	5.825E-05	3.219E-04

Methodology is the same as page

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter

See Page 5 for Greenhouse Gas calculations.

**Appendix A: Emissions Calculations**

**2 NG Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**Greenhouse Gas Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/M	120,000	2.3	2.2
Potential Emission in tc	18,396	0.4	0.3
Summed Potential Emissions in tons/yr	18,397		
CO2e Total in tons/yr	18,508		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4

**Appendix A: Emissions Calculations**

**2 x #4 Fuel Oil Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Weight % Sulfur  
0.5

35

2190

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/k	7.0	5.8	3.1	75 (150.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	7.7	6.4	3.4	82.1	21.9	0.4	5.5

**Methodology**

1 gallon of No. 4 Fuel Oil has a heating value of 150,000 Btu

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

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

\*PM emission factor is filterable PM only. Condensable PM emission factor is 1.5 lb/kgal.

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

See page 7 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**2 x #2 Fuel Oil Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**HAPs Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

HAPs - Metals					
Emission Factor in lb/mmBtu	Arsenic 4.0E-06	Beryllium 3.0E-06	Cadmium 3.0E-06	Chromium 3.0E-06	Lead 9.0E-06
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

HAPs - Metals (continued)				
Emission Factor in lb/mmBtu	Mercury 3.0E-06	Manganese 6.0E-06	Nickel 3.0E-06	Selenium 1.5E-05
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Methodology**

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

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

See Page 8 for Greenhouse Gas calculations.

**Appendix A: Emissions Calculations**

**2 x #4 Fuel Oil Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**Greenhouse Gas Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/k		0.216	
Emission Factor in kg/mmBtu	75.04		0.0006
Potential Emission in tons/yr	25,361	0.2	0.2
Summed Potential Emissions in tons/yr	25,362		
CO2e Total in tons/yr	25,429		

**Methodology**

CO2 and N2O Emission Factors are from Tables C-1 and 2 of 40 CFR Part 98 Subpart C.

CH4 Emission Factor is from AP 42, Table 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/99 (see erata file)

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

CO2 and N2O Emission (tons/yr) = Heat Input Capacity mmBtu/hr x Emission Factor (kg/mmBtu) x

CH 4 Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x

**Appendix A: Emissions Calculations**

**2 x #2 Fuel Oil Fire Tube Boilers  
17.5 MM BTU/HR Each**

**Company Name: PQ Corporation  
Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129  
Permit Number: 30685  
Plt ID: 019-00018  
Reviewer: Ghassan Shalabi  
Date: 8/1/2011**

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

35    2190

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	71 (142.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	2.2	2.6	2.3	77.7	21.9	0.4	5.5

**Methodology**

1.3

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

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement

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

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

See page 10 for HAPs emission calculations.

**Appendix A: Emissions Calculations**

**2 x #2 Fuel Oil Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**HAPs Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

HAPs - Metals					
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	6.13E-04	4.60E-04	4.60E-04	4.60E-04	1.38E-03

HAPs - Metals (continued)				
	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	4.60E-04	9.20E-04	4.60E-04	2.30E-03

**Methodology**

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

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

See Page 11 for Greenhouse Gas calculations

**Appendix A: Emissions Calculations**

**2 x #2 Fuel Oil Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**Greenhouse Gas Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal	21,500	0.216	0.26
Potential Emission in tons/yr	23,543	0.2	0.3
Summed Potential Emissions in tons/yr	23,543		
CO2e Total in tons/yr	23,636		

**Methodology**

The CO2 Emission Factor for #1 Fuel Oil is 21500. The CO2 Emission Factor for #2 Fuel Oil is 22300. Emission Factors are from AP 42, Tables 1.3-3, 1.3-8, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton  
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission

**Appendix A: Emissions Calculations**

**One (1) natural gas fired dryer**

**MM BTU/HR <100**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
10.0	1000	87.6

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tc	0.1	0.3	0.3	0.0	4.4	0.2	3.7

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

PM2.5 emission factor is filterable and condensable PM2.5 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

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

See page 13 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**HAPs Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

Potential Emission in tc	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
--------------------------	-----------	-----------	-----------	-----------	-----------

HAPs - Metals					
Emission Factor in lb/M	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tc	2.190E-05	4.818E-05	6.132E-05	1.664E-05	9.198E-05

Methodology is the same as page

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4

See Page 14 for Greenhouse Gas calculations.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**Greenhouse Gas Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

Emission Factor in lb/M	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tc	5,256	0.1	0.1
Summed Potential Emissions in tons/yr	5,256		
CO2e Total in tons/yr	5,288		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

**Appendix A: Emissions Calculations**

**NG Melting Furnace**

**19.7 MM BTU/HR**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
19.7	1000	172.6

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tc	0.2	0.7	0.7	0.1	8.6	0.5	7.2

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

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recircula

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of C

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02,

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,C

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,00

See page 16 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**2 NG Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**HAPs Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

HAPs - Organics					
Emission Factor in lb/V	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tc	1.812E-04	1.035E-04	6.471E-03	1.553E-01	2.934E-04

HAPs - Metals					
Emission Factor in lb/V	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tc	4.314E-05	9.491E-05	1.208E-04	3.279E-05	1.812E-04

Methodology is the same as page

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapte

See Page 17 for Greenhouse Gas calculations.

**Appendix A: Emissions Calculations**

**2 NG Fire Tube Boilers**

**17.5 MM BTU/HR Each**

**Greenhouse Gas Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/M	120,000	2.3	2.2
Potential Emission in tc	10,354	0.2	0.2
Summed Potential Emissions in tons/yr	10,355		
CO2e Total in tons/yr	10,417		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4

**Appendix A: Emissions Calculations**

**#2 Fuel Oil Metering Furnce**

**19.7 MM BTU/HR**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
kgals/year

S = Weight % Sulfur  
0.5

19.7

1232.65714

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	7.0	5.8	3.1	75 (150.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	4.3	3.6	1.9	46.2	12.3	0.2	3.1

**Methodology**

1 gallon of No. 4 Fuel Oil has a heating value of 150,000 Btu

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

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

\*PM emission factor is filterable PM only. Condensable PM emission factor is 1.5 lb/kgal.

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

**Appendix A: Emissions Calculations**

**#2 Fuel Oil melting furnace**

**19.7 MM BTU/HR**

**HAPs Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

HAPs - Metals					
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

HAPs - Metals (continued)				
	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Methodology**

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

See Page 20 for Greenhouse Gas calculations.

**Appendix A: Emissions Calculations**

**#2 Fuel Oil Melting Furnace**

**19.7 MM BTU/HR**

**Greenhouse Gas Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal		0.216	
Emission Factor in kg/mmBtu	75.04		0.0006
Potential Emission in tons/yr	14,275	0.1	0.1
Summed Potential Emissions in tons/yr	14,275		
CO2e Total in tons/yr	14,313		

**Methodology**

CO2 and N2O Emission Factors are from Tables C-1 and 2 of 40 CFR Part 98 Subpart C.

CH4 Emission Factor is from AP 42, Table 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/99 (see erata file)

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

CO2 and N2O Emission (tons/yr) = Heat Input Capacity mmBtu/hr x Emission Factor (kg/mmBtu) x

CH 4 Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x

**Appendix A: Emissions Calculations**

**#2 Fuel Oil melting furncace**

**19.7 MM BTU/HR**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

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

19.7                                      1232.657

	Pollutant						
	PM*	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	2.4	2.1	71 (142.0S)	20.0	0.34	5.0
Potential Emission in tons/yr	1.2	1.5	1.3	43.8	12.3	0.2	3.1

**Methodology**

1.3

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

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement

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

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

See page 22 for HAPs emission calculations.

**Appendix A: Emissions Calculations**

**#2 Fuel Oil melting furnace**

**19.7 MM BTU/HR**

**HAPs Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

HAPs - Metals					
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	3.45E-04	2.59E-04	2.59E-04	2.59E-04	7.77E-04

HAPs - Metals (continued)				
	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	2.59E-04	5.18E-04	2.59E-04	1.29E-03

**Methodology**

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

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

See Page 23 for Greenhouse Gas calculations

**Appendix A: Emissions Calculations**

**#2 Fuel Oil melting furnace**

**19.7 MM BTU/HR**

**Greenhouse Gas Emissions**

**Company Name: PQ Corporation**

**Address City IN Zip: 1101 Quartz Rd, Clarksville, IN 47129**

**Permit Number: 30685**

**Plt ID: 019-00018**

**Reviewer: Ghassan Shalabi**

**Date: 8/1/2011**

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/kgal	21,500	0.216	0.26
Potential Emission in tons/yr	13,251	0.1	0.2
Summed Potential Emissions in tons/yr	13,251		
CO2e Total in tons/yr	13,304		

**Methodology**

The CO2 Emission Factor for #1 Fuel Oil is 21500. The CO2 Emission Factor for #2 Fuel Oil is 22300. Emission Factors are from AP 42, Tables 1.3-3, 1.3-8, and 1.3-12 (SCC 1-03-005-01/02/03) Supplement Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton  
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Governor**

*Thomas W. Easterly*  
**Commissioner**

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Toll Free (800) 451-6027  
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## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Jeff Sauffer  
PQ Corp  
1101 Quartz Road  
Clarksville, IN 47129

DATE: November 3, 2011

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

SUBJECT: Final Decision  
Title V  
019-30685-00018

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Larry Masaro, Responsible Official  
George Monasky, Consultant  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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**Governor**

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Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Jeffersonville Township Public Library

From: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: PQ Corp**  
**Permit Number: 019-30685-00018**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures  
Final Library.dot 11/30/07

# Mail Code 61-53

IDEM Staff	DPABST 11/3/2011 PQ Corp 019-30685-00018 (Final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

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1		Jeff Sauffer PQ Corp 1101 Quartz Rd Clarksville IN 47129 (Source CAATS) (CONFIRM DELIVERY)									
2		Larry Masaro Dir - NA Plant Ops PQ Corp 429 Kipling Ave Etobicoke ON M87-5C7 (RO CAATS)									
3		Ms. Rhonda England 17213 Persimmon Run Rd Borden IN 47106-8604 (Affected Party)									
4		Ms. Betty Hislip 602 Dartmouth Drive, Apt 8 Clarksville IN 47129 (Affected Party)									
5		Mrs. Sandy Banet 514 Haddox Rd Henryville IN 47126 (Affected Party)									
6		Jeffersonville City Council and Mayors Office 500 Quarter Master Jeffersonville IN 47130 (Local Official)									
7		Jeffersonville Twp Public 211 E Court Ave, P.O. Box 1548 Jeffersonville IN 47131-1548 (Library)									
8		Mr. Robert Bottom Paddlewheel Alliance P.O. Box 35531 Louisville KY 40232-5531 (Affected Party)									
9		Clark County Board of Commissioners 501 E. Court Avenue Jeffersonville IN 47130 (Local Official)									
10		Clark County Health Department 1320 Duncan Avenue Jeffersonville IN 47130-3723 (Health Department)									
11		George Monasky Cornerstone EHS LLC 349 Crescent Drive New Galilee PA 16141 (Consultant)									
12											
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