INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: September 4, 2008

RE: PQ Corporation / 019-23178-00018

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

Notice of Decision: Approval – Effective Immediately

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

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

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

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

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

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

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

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

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

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

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

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

Enclosures
FNTVOP.dot12/3/07

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

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

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

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

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

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

Operation Permit No.: T019-23178-00018	
Issued by: Original signed by Alfred C. Dumaual, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date:September 4, 2008 Expiration Date:September 4, 2013

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

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

Source Address:	7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
Mailing Address:	P.O. Box 669, Jeffersonville, Indiana 47131
General Source Phone Number:	(812) 288-7186
SIC Code:	2819
County Location:	Clark
Source Location Status:	Attainment for 8-hour ozone standard Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

This 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 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. 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 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.

(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 material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo equipped with a baghouse with no unit identification for particulate control exhausting at 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)]

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]

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, 019-23178-00018, 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]

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]

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

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

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

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain

certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) The "responsible official" is defined at 326 IAC 2-7-1(34).

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

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. 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 Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each 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.

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

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

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

(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, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

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

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

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or

possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to 019-23178-00018 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 combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

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

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

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

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

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

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

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.
[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

(1) That this permit contains a material mistake.

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

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

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

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

B.17 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12][40 CFR 72]

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

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

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

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

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

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

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

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

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

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

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

B.22 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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

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

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

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

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

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

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

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

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

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

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

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

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

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

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

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

B.25 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

(a) The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.

(b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.26 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of 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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on June 4, 2002.

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

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

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

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

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

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

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

(1) monitoring results;

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

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

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

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

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

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

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

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

(a) 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 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

(c) If there is a 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)) tha a "project" (as defined in 326 IAC 2-2-1(qq)) and/or 326 IAC 2-3-1(ll) at an existing emissions unit, other than projects at a source with Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee) and/or 326 IAC 2-3-1(z)) may result in a significant emissions increase, and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-*2*-1(rr*)* and/or 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(ll)) at an existing emissions unit, document and maintain the following records:
  (A) A description of the project.
  (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
  (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
    (i) Baseline actual emissions;
    (ii) Projected actual emissions;
    (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) 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(ll)) 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 the following:

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

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

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

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

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

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

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

(f) If the Permittee is required to comply with the recordkeeping provisions of (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 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

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

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

(g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

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

(2) The annual emissions calculated in accordance with (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 deems fit to include in this report.

Reports required in this part shall be submitted to:

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

Stratospheric Ozone Protection

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

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

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) 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 [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]

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_x 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.

D.1.5 Nitrogen Oxides (NOx) [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 NOx emissions.

(d) The Permittee shall monitor the flame pattern using visual inspections and make necessary adjustments to maintain low NOx 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:

Fuel	Crown Temperature Range (^{o}F)	Excess Oxygen Range (%)
Natural Gas	2200 - 2800	1.0 - 1.6
Fuel Oil	2200 - 2800	1.0 - 3.0

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_x 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_x emissions as required by 326 IAC 10-1.

D.1.6 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

(a) Pursuant to 326 IAC 7-1.1 (SO2 Emissions Limitations) the SO2 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 (SO2 Emissions Limitations), the SO2 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.1.7 Preventive Maintenance Plan [326 IAC 2-7-5 (13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each facility and its control device.

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

D.1.8 Particulate Matter (PM)

In order to comply with Condition D.1.2 the baghouse (exhausting to Stack S-6) for PM and PM10 control shall be in operation and control emissions from the dryer at all times that the dryer is in operation.

D.1.9 Sulfur Dioxide Emissions and Sulfur Content

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

(a) Visible emission notations of the boiler stack exhausts (stack S-2) 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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.11 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_x and SO_2 emission factors used to determine the potential emissions from one of the boilers while combusting biodiesel, utilizing methods as approved by the Commissioner.

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

D.1.12 Record Keeping Requirements

(a) To document compliance 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 NOx 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 compliance 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.13 Reporting Requirements for Nitrogen Oxides (NO_x)

A quarterly summary of the information to document compliance with Condition D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, using the quarterly reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of each quarter being reported. The report submitted by the Permittee requires the certification by the "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 equipped with a baghouse with no unit identification for particulate control exhausting at 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 permitee shall be subject to the following PM and PM_{10} limitations:

Unit	PM Limit (lbs/hr)	PM_{10} (lbs/hr)
S-3 Baghouse	2.64	2.64
S-12 Baghouse	2.64	2.64
S-8 Baghouse	3.29	3.29
S-7 Baghouse	3.29	3.29
S-6 Baghouse	1.38	1.38
S-11 Baghouse	1.38	1.38

Compliance with these PM and PM10 emission limits from the storage and handling facilities, in conjunction with the total potential to emit of PM and PM_{10} from the rest of the source, shall ensure that the source-wide PM and PM_{10} emissions are less than one hundred (100) tons per twelve consecutive month period, rendering the requirements of 326 IAC 2-2 not applicable.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each facility and its control device.

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 Matter (PM)

In order to comply 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, S-11 and S-12) for PM and PM_{10} 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.

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

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

(a) Within 180 days after issuance of this permit T019-23178-00018, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} 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_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing.

(b) Within five years of performing PM and PM_{10} testing for the S-7 or S-8 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} 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_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing.

(c) Within five years of performing PM and PM_{10} testing for the S-6 baghouse,

in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} 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_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing.

(d) Within five years of performing PM and PM_{10} testing for the S-3 baghouse, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM_{10} 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_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with 326 IAC 3-6 and Section C-Performance Testing.

D.2.6 Visible Emissions Notations

(a) Daily visible emission notations of stack exhausts S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11 and S-12 shall be performed day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.2.7 Parametric Monitoring

(a) 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 latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

(b) The instrument used for determining the pressure 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

(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

(a) To document compliance 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 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 compliance with Condition D.2.7, the Permittee shall maintain records once per day of the pressure drop. The Permittee shall include in its daily record when 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) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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 of 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)]

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 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(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]

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

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

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

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, for boilers SG-1001 and SG-1002 as specified as follows:

Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Dc]

Title 40: Protection of Environment
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after

June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 60.41c Definitions.

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

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.42c Standard for sulfur dioxide (SO_2).

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in

excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter (PM).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be

discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2emissions is not subject to the PM limit in this section.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO_2 emission limits under §60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2emission rate (E_{ho}) and the 30-day average SO_2emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate $E_{ao}$when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho}(E_{ho}o) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao}(E_{ao}o). The E_{ho}o is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_j)}{X_j}$$

Where:

E_{ho}o = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2emission rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0.

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$or $X_k$if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$= Potential SO_2emission rate, in percent;

$\%R_g$= SO_2removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$= SO_2removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$($\%R_g$o) is computed from E_{ao}o from paragraph (e)(1) of this section and an adjusted average SO_2inlet rate (E_{ai}o) using the following formula:

$$\%R_{go} = 100\left(1 - \frac{E^{\circ}_{ao}}{E^{\circ}_{ai}}\right)$$

Where:

$\%R_g$o = Adjusted $\%R_g$, in percent;

E_{ao}o = Adjusted E_{ao}, ng/J (lb/MMBtu); and

E_{ai}o = Adjusted average SO_2inlet rate, ng/J (lb/MMBtu).

(ii) To compute $E_{ai}o$, an adjusted hourly SO_2inlet rate ($E_{hi}o$) is used. The $E_{hi}o$ is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

$E_{hi}o$ = Adjusted E_{hi}, ng/J (lb/MMBtu);

E_{hi}= Hourly SO_2inlet rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0; and

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2emissions data in calculating $\%P_s$and E_{ho}under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$or E_{ho}pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent

performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3 of appendix A of this part shall be used for gas analysis when applying Method 5, 5B, or 17 of appendix A of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2or CO_2measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A of this part (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated

24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with EPA Reference Method 5, 5B, or 17 of appendix A of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 of appendix A of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(13) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (d)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (d)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (d)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraph (d)(7)(i) of this section.

(i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.

(ii) For O_2(or CO_2), EPA reference Method 3, 3A, or 3B of appendix A of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either O_2or CO_2concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO_2concentrations and either O_2or CO_2concentrations at both the inlet and outlet of the SO_2control device.

(b) The 1-hour average SO_2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO_2emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO_2emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO_2CEMS at the inlet to the SO_2control device shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted, and the span value of the SO_2CEMS at the outlet from the SO_2control device shall be 50 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO_2CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if

no SO_2control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$and CO_2measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring

system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All COMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.06 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO_2or PM emissions are not required to operate a CEMS for measuring opacity if they follow the applicable procedures under §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the output of the system, for PM emissions discharged to the atmosphere as specified in §60.45c(d). The CEMS specified in paragraph §60.45c(d) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) An affected facility that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS for measuring opacity. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section.

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. At least two data points per hour must be used to calculate each 1-hour average.

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An affected facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the appropriate delegated permitting authority is not required to operate a COMS for measuring opacity. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) The owner or operator of each coal-fired, oil-fired, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.

(d) The owner or operator of each affected facility subject to the SO_2emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO_2standard, fuels not subject to an emissions standard

(excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO_2standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

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

Source Name: PQ Corporation
Source Address: 7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
Mailing Address: P.O. Box 669, Jeffersonville, IN 47131
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 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: 7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
Mailing Address: P.O. Box 669, Jeffersonville, IN 47131
Part 70 Permit No.: T019-23178-00018

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

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

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

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

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

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

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

Source Name: P Q Corporation
Source Address: 7th Street and Missouri Avenue, Jeffersonville, Indiana 47310
Mailing Address: P. O. Box 669, Jeffersonville, IN 47131
Part 70 Permit No.: T019-23178-00018
Facility: □ SG-1001
□ SG-1002

□ Natural Gas Only
□ Alternate Fuel burned
From:_____ To:_____

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
Part 70 Quarterly Report

Source Name: PQ Corporation
Source Address: 7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
Mailing Address: P.O. Box 669, Jeffersonville, IN 47131
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: NOx
Limit: 180 MMscf of natural gas (or fuel oil equivalent) per twelve (12) consecutive month period.

QUARTER: YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Fuel Usage This Month	Fuel Usage Previous 11 Months	Fuel Usage 12 Month Total
Month 1			
Month 2			
Month 3			

Notes: (1) Each gallon of No. 2 fuel oil, No. 4 fuel oil or combination of No.2 and No.4 fuel oils burned in the furnace is equivalent to 93.5 scf of natural gas burned in the furnace.
(2) Each gallon of No. 2 fuel oil, No. 4 fuel oil or combination of No. 2 and No. 4 fuel oils burned in a boiler is equivalent to 18.33 scf of natural gas burned in the furnace.
(3) Each standard cubic foot of natural gas burned in a boiler is equivalent to 0.092 scf of natural gas burned in the furnace.
(4) Each standard cubic feet of natural gas burned in the dryer is equivalent to 0.092 scf of natural gas burned in the furnace.

□ No deviation occurred in this quarter.
□ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

Source Name: PQ Corporation
Source Address: 7th Street and Missouri Avenue, Jeffersonville, Indiana 47130
Mailing Address: P.O. Box 669, Jeffersonville, IN 47131
Part 70 Permit No.: T019-23178-00018

Months: _____ to _ Year: _____

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

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**PQ Corporation**
Source Location:	**7th Street and Missouri Avenue, Jeffersonville, Indiana 47130**
County:	**Clark**
SIC Code:	**2819**
Permit Renewal No.:	**T019-23178-00018**
Permit Reviewer:	**Jamal Naas/ Timothy R. Pettifor**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from PQ Corporation relating to the operation of a sodium silicate and sodium aluminosilicate manufacturing facility. On June 5, 2006, PQ Corporation submitted applications to the OAQ requesting to renew its operating permit. PQ Corporation was issued a Part 70 Operating Permit, T019-7718-00018, on March 28, 2002.

Permitted Emission Units and Pollution Control Equipment

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, with No. 2 fuel oil, No. 4 fuel oil 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. 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 019-16660-0018 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 material throughput of 33.5 tons per hour, consisting of a bucket conveyor system and one (1) 1,400 ton capacity storage silo equipped with a baghouse with no unit identification for particulate control exhausting at 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.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

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 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)].

Existing Approvals

Since the issuance of the Part 70 Operating Permit 019-7718-00018 on March 28, 2002, the source has constructed or has been operating under the following approvals as well:

(a) First Administrative Amendment 019-16660-00018, issued on February 11, 2003;

(b) Second Administrative Amendment 019-17258-00018, issued on June 30, 2003;

(c) Third Administrative Amendment 019-18533-00018, issued on January 21, 2004; and

(d) Fourth Administrative Amendment 019-19152-00018, issued on July 28, 2004.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been revised in this Part 70 Operating Permit Renewal:

(a) Static pressure range for exhaust stacks

The permit currently references a static pressure range of 3.0 to 6.0 inches of water for the operation of baghouses S-3, S-4, S-5, S-8, S-9, S-10, S-11 and S-12. The applicable permit sections were revised to allow these units to operate within the normal static pressure range of 1.0 to 6.0 inches of water.

(b) Visible Emissions Requirements

The permit currently requires that visible emissions notations from stack exhausts S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, and S-12 be performed once per operating shift. The applicable permit sections were revised to allow the performance of visible emission notation of applicable stack exhaust, once per day.

(c) Back up fuel option

The permit currently allows the use of No. 2 and No. 4 fuel oil for the two (2) fire tube boilers (SG-1001 and SG-1002) and one (1) melting furnace. The applicable permit sections were revised to allow the use of biodiesel as optional back up fuel for these emission units.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S-2	Fire Tube Boilers	78	3.52	6000	140-160
S-6	Dryer	90	2	8000	170
S-1	Melting Furnace	45	2	12000	400-500
S-3	Aluminum Trihydrate Storage & Transfer	Unknown	Unknown	1459	Ambient
S-4	Storage Silo	Unknown	Unknown	733	Ambient
S-5	Weigh Bin	Unknown	Unknown	11	Ambient
S-12	Storage Silo	Unknown	Unknown	1459	Ambient
S-8	Storage Silo	Unknown	Unknown	3000	Ambient
SSBV	Storage Silo	Unknown	Unknown	277	Ambient
S-7	Weigh Hoppers	Unknown	Unknown	Unknown	Ambient
S-9	Storage Silos	Unknown	Unknown	277	135
S-10	Storage Silos	Unknown	Unknown	277	135
S-11	Pneumatic Conveyor System	10	0.5	1000	135

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 to 10).

County Attainment Status

The source is located in Clark County

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective July 19, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Attainment effective October 23, 2001, for the 1-hour ozone standard for the Louisville area, including Clark County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for purposes of 40 CFR Part 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.
Basic nonattainment designation effective federally April 5, 2005, for PM2.

(a) Clark County has been classified as nonattainment for $PM_{2.5}$ in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for $PM_{2.5}$ emissions, it has directed states to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability – Entire Source section.

(b) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NO_x emissions are considered when evaluating the rule applicability relating to ozone standards. Clark County has been designated as attainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Clark County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(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.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	2,470.6
PM_{10}	2,470.4
SO_2	177.93
VOC	3.61
CO	15.18
NO_x	120.45

HAPs	tons/year
Benzene	3.219E-04
Dichlorobenzene	1.840E-04
Formaldehyde	1.150E-02
Hexane	2.759E-01
Toluene	5.212E-04
Lead	1.38E-03
Cadmium	4.60E-04
Chromium	4.60E-04
Manganese	9.20E-04
Nickel	4.60E-04
Arsenic	6.13E-04
Beryllium	4.60E-04
Mercury	4.60E-04
Selenium	2.30E-03
Total	2.96E-01

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM_{10}, SO_2, and NO_x is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

(d) Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are counted toward the determination of Part 70 applicability.

Actual Emissions

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

Pollutant	Actual Emissions (tons/year)
PM	Not reported
PM_{10}	20
SO_2	50
VOC	3
CO	11
NO_x	89
HAP	Not reported

Part 70 Permit Conditions

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

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

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

	Potential to Emit (tons/year)						
Process/Emission Unit	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPs**
Boilers	7.7	9.1	<100	0.37	5.5	<98	Negligible
Furnace	25.1	23.7		3.0	6.0		Negligible
Dryer	0.08	0.33		0.24	3.68		Negligible
Space Heaters	-	-	-	-	-	<1.8	Negligible
Sand & Soda Ash (S-7 & S-8)	28.82	28.82	0	0	0	0	0
Aluminum Trihydrate (S-3)	11.56	11.56	0	0	0	0	0
Sodium Aluminosilicate (S-6 & S-11)	12.09	12.09	0	0	0	0	0
Sodium Silicate (S-12)	11.56	11.56	0	0	0	0	0
Total	**96.9**	**97.16**	**<100****	**3.61**	**15.18**	**<100.0***	Negligible

***NO_x** emissions from the boilers, dryer and the furnace are limited to less than 98 tons per year.
** Compliance with the NO_x emission limits will also limit the SO_2 emissions to less than 100 tons per year.

(a) This existing stationary source is not major for PSD because the emissions of at least one attainment pollutant are less than one hundred (<100) tons per year, and it is one of the twenty-eight (28) listed source categories.

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

Federal Rule Applicability

The following federal rules are applicable to the source:

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to existing emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

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

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Fire tube boiler SG-1001 PM/PM_{10}	-	Y	4.55	4.55	100	N	N
Fire tube boiler SG-1002 PM/PM_{10}	-	Y	4.55	4.55	100	N	N
Melting furnace PM/PM_{10}	-	Y	25	25	100	N	N
Material Storage and Handling PM/PM_{10}	Baghouse	Y	2041.3	20.4	100	Y	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to Material Storage and Handling for PM_{10} upon issuance of the Title V Renewal. A CAM plan will be incorporated into this Part 70 permit renewal. The Material Storage and Handling operations are subject to visible emission notations, particulate control requirements, and parametric monitoring requirements. Therefore, no additional monitoring requirements have been added to the permit for these operations.

(b) The storage tanks are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60 Subparts K, Ka, and Kb, because the tanks were constructed in 1938 and are not used to store VOCs.

(c) The two boilers are used to produce steam and each of them has a maximum heat input capacity less than 100 MMBtu/hr or greater than or equal to 10 MMBtu/hour and are constructed after June 19, 1989. Therefore, they are both subject to the New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12, 40 CFR 60.40b-49b, Subpart Dc).

Nonapplicable portions of the NSPS will not be included in the permit. The boilers are subject to the following portions of 40 CFR 60, Subpart Dc.

1. 40 CFR 60.40c

2. 40 CFR 60.41c
3. 40 CFR 60.42c (d), (h)(1), (2), (i), (j)
4. 40 CFR 60.43c (d), (e)
5. 40 CFR 60.44c
6. 40 CFR 60.45c
7. 40 CFR 60.46c
8. 40 CFR 60.47c
9. 40 CFR 60.48c
10. 40 CFR 60.48c

(d) The melting furnace is not subject to the requirements of the New Source Performance Standard 40 CFR 60, Subpart CC (Glass Manufacturing Plants) (326 IAC 12), because (1) the furnace is used to manufacture a soluble inorganic chemical rather than the flat, pressed, blown or container glass manufactured using a traditional glass furnace; (2) no additives such as lead, sulfates, arsenic, or fluorides are added; (3) the operating temperature for the furnace is less than for traditional glass furnaces; and (4) the production process after the furnace bears no similarity to the glass making industry.

Subpart CC includes PM limits for container glass, pressed and blown glass (including borosilicate, lead and opal fluoride recipes), wool fiberglass, and flat glass. PQ Corporation does not manufacture any of these products. Subpart CC does not provide any limits for furnaces manufacturing sodium silicate pellets (an inorganic chemical).

(e) 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.

(f) 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 - Entire Source

326 IAC 2-2 (PSD Minor Limit)

(a) Emissions of nitrogen oxides (NO_x) 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-nine (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_x 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:

(1) 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.

(2) 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.

(3) 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.

(4) 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.

Note: The above emission limitations are based on the emissions of the natural gas burned in the furnace. The emission limitations were calculated using the following methodology.

NO_x emissions from burning 1 scf of natural gas in the furnace:

21.5 lb NO_x /hr / 19.7 MMBtu/hr = 1.091 lb NO_x /MMBtu x 1000 MMBtu/1 MMscf x 1MMscf/1,000,000 scf = 0.001091 lb NO_x / scf. (or 1091 lbs NO_x / MMscf)

Emission limitation for fuel oil burned in furnace:

14.42 lb NO_x /hr / 19.7 MMBtu/hr = 0.7320 lb NO_x / MMBtu x 0.140 MMBtu/gal x 1 scf / 0.001091 lb NO_x = 93.5 scf/gal.

Emission limitation for fuel oil burned in the boilers (SG-1001 & SG-1002):

20 lbs NO_x / Kgal fuel oil x 1Kgal/1000 gal x 1 scf/ 0.001091 lbs NO_x = 18.33 scf / 1 gal.

Emission limitation for natural gas burned in the boilers and dryer:

100 lbs NO_x / MMscf $_{boilers\ \&\ dryer}$ x 1 MMscf $_{boilers\ \&\ dryer}$ / 1,000,000 scf $_{boilers\ \&\ dryer}$ x 1 scf $_{furnace}$ / 0.001091 lbs NO_x = 0.092 scf $_{furnace}$ / 1 scf $_{boilers\ \&\ dryer}$

(b) The permitee shall be subject to the following PM and PM10 limitations:

Unit	PM Limit (lbs/hr)	PM_{10} (lbs/hr)
S-3 Baghouse	2.64	2.64
S-12 Baghouse	2.64	2.64
S-8 Baghouse	3.29	3.29
S-7 Baghouse	3.29	3.29
S-6 Baghouse	1.38	1.38
S-11 Baghouse	1.38	1.38

The limits in the table above add up to 14.6 lbs/hour or 64 tons/year. The limits were calculated by multiplying 14.6 lbs/hour by the ratio of the amount of PM/PM_{10} emissions of a particular material storage and handling facility to the total amount of PM/PM_{10} emissions for all material storage and handling facilities (2,437.47 tons/year). The results were further broken down by the number of stacks.

Soda Ash & Sand: 14.6 lbs/hour x 440.19 + 657.0/2437.47 = 6.58 lbs/hr ./. 2 stacks (S-7,S-8) = 3.29 lbs/hr.

Aluminum trihydrate: 14.6 lbs/hour x 440.19/2437.47 = 2.64 lbs/hr ./. 1 stack (S-3) = 2.64 lbs/hr.

Sodium Silicate: 14.6 lbs/hour x 440.19/2437.47 = 2.64 lbs/hr ./. 1 stack (S-12) = 2.64 lbs/hr.

Sodium aluminosilicate: 14.6 lbs/hr x 459.9/2437.47 = 2.75 lbs/hr ./. 2 stacks (S-6, S-11) = 1.38 lbs/hr.

Compliance with these PM,PM_{10} , and NOx limits shall ensure that the source-wide PM, PM_{10} and NOx emissions are less than 100 tons per twelve consecutive month period, rendering the requirements of 326 IAC 2-2 not applicable.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. In accordance with the compliance schedule specified in 326 IAC 2-6-3, an emission statement must be submitted triennially by July 1 beginning in 2006 and every 3 years after. Therefore, the next emission statement for this source must be submitted by July 1, 2009. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary 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%) 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.

State Rule Applicability - Individual Facilities

326 IAC 2-3 (Emission Offset)

Clark County has been classified as nonattainment for $PM_{2.5}$ in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific rules for $PM_{2.5}$ emissions, it has directed states to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions. The limited PM_{10} emissions are less than 100 tons per year. Therefore, the source is not a major source for PM_{10} which is a surrogate for $PM_{2.5}$.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

326 IAC 6-3-2 does not apply to the natural gas-fired dryer because its emissions are less than 0.551 pound per hour.

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.

A comparison of the 6-3-2 and 6.5 limitations for the aluminum trihydrate storage and transfer facilities; sodium silicate storage and transfer facilities; sand and soda ash storage and transfer facilities; sodium aluminosilicate transfer, storage, and loading facilities; is summarized below:

Process	Process Weight Rate (tons/hr)	6-3-2 Limit (lbs/hr)	6.5 Limit (lbs/hr)
Aluminum trihydrate storage and transfer facilities	33.5	40.9	0.38
Sodium silicate storage and transfer facilities	33.5	40.9	0.38
Sand and soda ash transfer facilities	84	49.5	0.77
Sodium aluminosilicate transfer, storage, and loading	35	41.3	2.05

The 6-3-2 limit was calculated using the following formula:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour
and P = process weight rate in tons per hour

The 6.5 limit was calculated using the following equation:

PM Limit = .03 gr/ft^3 x 1lb/7000 gr x Exhaust flow rate ft^3/min x 60 min/hour

According to the calculations above, 326 IAC 6.5 limit is the more stringent, and therefore 326 IAC 6-3-2 does not apply to these processes.

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The source is located in Clark County. This source is located in the area listed in 326 IAC 6-5-1(a)(2)(A). The source does not have particulate fugitive emissions that exceed 25 tons per year Pursuant to 326 IAC 6-5-7(d), this source is not subject to the requirements of 326 IAC 6-5.

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.

(a) 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.

(b) 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.

Note: The 5 MMBtu per hour boiler specified in 326 IAC 6.5-2-9 has been decommissioned and is no longer at the plant.

(c) Pursuant to 326 IAC 6.5-2(a) (Particulate Emission Limitations), the particulate matter emissions from the dryer; 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. 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.

326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd County)

PQ Corporation failed to submit a BACT analysis for the furnace when it was modified in 1998 as required by 326 IAC 10-1-1(a)(3). PQ Corporation did submit a BACT analysis for the furnace on January 24, 2001 and the information from this analysis was used in preparation of the original Title V permit, T019-7718-00018, issued on March 28, 2002.

Based on information provided by PQ Corporation and pursuant to Administrative Amendment 019-16660-0018 issued on February 11, 2003, IDEM, OAQ determined that 326 IAC 10-1 is applicable to the furnace because 326 IAC 10-1-1(a)(3) was triggered when PQ modified the furnace in 1998. This rule requires the furnace to comply with either the requirements of 326 IAC 10-1 or Best Available Control Technology (BACT), whichever is more stringent. For facilities that emit or have the potential to emit NOx equal to or greater than 40 tons per year, pursuant to 326 IAC 10-1-4(b)(5) actual NOx emissions must be controlled by at least 40%. Since the BACT proposed by PQ Corporation reduces emissions by greater than 40%, IDEM concluded their BACT will be more stringent than the requirements of 326 IAC 10-1-4(b)(5).

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_x emissions.

(d) The Permittee shall monitor the flame pattern using visual inspections and make necessary adjustments to maintain low NOx emissions. The flame patterns will be observed by a trained employee at least once per day when the furnace is in normal operation.

(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:

Fuel	Crown Temperature Range (^{o}F)	Excess Oxygen Range (%)
Natural Gas	2200 - 2800	1.0 - 1.6
Fuel Oil	2200 - 2800	1.0 - 3.0

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_x 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.

326 IAC 7-1.1-1 (Sulfur Dioxide (SO_2) Emissions Limitations)

Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations), the SO_2 emissions from the melting furnace and 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 Btu heat input while combusting fuel oil.

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

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.

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

(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 of 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.

Testing Requirements

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing*	Limit or Requirement
Boiler SG-1001 or SG-1002	None	60 to 180 days after initial usage of biodiesel as a fuel while combusting biodiesel	SO2, NOx	One time stack test.	Verify emission factors: SO2 $\leq$ 71 lb/kgal NOx $\leq$ 20 lb/kgal
Sand and Soda Ash Storage and Handling Facilities	Baghouse for S-7 or S-8	180 days after issuance of this permit	PM/PM10	Every 20 Years	3.29 lbs/hour
Sodium Aluminosilicate Storage and Handling Facilities	Baghouse for S-6	Within 5 years of testing Baghouse for S-7 or S-8	PM/PM10	Every 20 Years	1.38 lbs/hour
Aluminum Trihydrate Storage and Handling Facilities	Baghouse for S-3	Within 5 years of testing Baghouse for S-6	PM/PM10	Every 20 Years	2.64 lbs/hour
Sodium Aluminosilicate Storage and Handling Facilities	Baghouse for S-11	Within 5 years of testing Baghouse for S-6	PM/PM10	Every 20 Years	1.38 lbs/hour

*Note: One baghouse will be tested at the source every five years. Testing each baghouse every twenty years was approved by OAQ Compliance Data Section.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance

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

The compliance monitoring requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Baghouses for the aluminum trihydrate storage and transfer facilities, stacks S-3, S-4, & S-5.	Water Pressure Drop	Daily	1 to 6 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Baghouses for the sodium silicate storage and transfer facilities, Stack S-12.	Water Pressure Drop	Daily	1 to 6 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Baghouses for the sand and soda ash storage and transfer facilities, stacks SSBV, S-8, & S-7.	Water Pressure Drop	Daily	1 to 6 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Baghouses for the sodium aluminosilicate transfer, storage, and loading facilities, stacks S-6, S-9, S-10, & S-11.	Water Pressure Drop	Daily	1 to 6 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Fire Tube boilers (SG-1001 and SG-1002), Stack S-2	Visible Emissions	Daily when burning fuel oil.	Normal-Abnormal	Response Steps
Melting Furnace, Stack S-1	Visible Emissions	Daily when burning fuel oil.	Normal-Abnormal	Response Steps
Melting Furnace when using natural gas	Crown Temperature	Daily	2200 ^{o}F to 2800 ^{o}F	Response Steps
	Excess Oxygen		1 - 6 %	
Melting Furnace when using fuel oil	Crown Temperature	Daily	2200 ^{o}F to 2800 ^{o}F	Response Steps
	Excess Oxygen		1 - 3 %	

Recommendation

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

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

An application for the purposes of this review was received on June 5, 2006.

Conclusion

The operation of this sodium silicate and sodium aluminosilicate manufacturing facility shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 019-23178-00018.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Two Small Industrial Boilers
MM BTU/HR <100

Company Name: **PQ Corporation**
Address City IN Zip: **7th Street and Missiouri Avenue, Jeffersonville, IN 47130**
Part 70 Permit Renewal Number: **T019-23178-00018**
Reviewer: **Jamal Naas/Timothy R. Pettifor**
Date: **September 28, 2007**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
35.0	306.6

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.29	1.17	0.09	15.33	0.84	12.88

*PM emission factor is filterable only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
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 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 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: 7th Street and Missouri Avenue, Jeffersonville, IN 47130
Part 70 Permit Renewal Number: T019-23178-00018
Reviewer: Jamal Naas/ Timothy R. Pettifor
Date: 7/5/2007

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

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

Methodology is the same as page 1.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
Combustion of #2 Fuel Oil or Back up Biodiesel Fuel in Two 17.5 MMBtu/hr Boilers

Company Name: **PQ Corporation**
Address, City IN Zip: **7th Street and Missiouri Avenue, Jeffesonville, IN 4713**
Part 70 Permit Renewal Number: **T019-23178-00018**
Reviewer: **Jamal Naas**
Date: **September 28, 2007**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
35	2190	0.5

	PM10	PM*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	4.6	3.3	71 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	5.04	3.61	77.75	21.90	0.37	5.48

Assumption: Due to the lack of Biodiesel emission factors, Fuel #2 Fuel Oil were utlized for Biodiesel fuel per EPA guidance.

Methodology

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 per 1000 gallon x 1 gal per 0.140 MM Btu

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 (see erata file)

*PM emission factor is filterable.

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

See page 4 for HAPs emission calculations.

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
Combustion of #2 Fuel Oil or Back up Biodiesel Fuel in Two 17.5 MMBtu/hr Boilers
HAPs Emissions

Company Name: **PQ Corporation**
Address, City IN Zip: **7th Street and Missouri Avenue, Jeffersonville, IN 47130**
Part 70 Permit Renewal Number: **T019-23178-00018**
Reviewer: **Jamal Naas**
Date: **5-Jul-2007**

	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 lb/ton

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
Combustion of #4 Fuel Oil in Two 17.5 MMBtu/hr Boilers

Company Name: **PQ Corporation**
Address, City IN Zip: **7th Street and Missouri Avenue, Jeffersonville, IN 47130**
Part 70 Permit Renewal Number: **T019-23178-00018**
Reviewer: **Jamal Naas/Timothy R. Pettifor**
Date: **September 28, 2007**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.5
35	2190	

	PM-10	PM*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	8.3	7.0	75 *(150.0S)*	20.0	0.20	5.0
Potential Emission in tons/yr	9.09	7.7	82.1	21.9	0.2	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 gallon x 1 gal per 0.140 MM Btu

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 (see erata file)

*PM emission factor is filterable PM only.

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

No data was available in AP-42 for HAPs emissions for #4 Fuel Oil.

Appendix A: Emissions Calculations
Natural Gas-Fired Dryer
MM BTU/HR <100

Company Name: PQ Corporation
Address City IN 7th Street and Missiouri Avenue, Jeffersonville, IN 47130
Part 70 Permit Renewal Number: T019-23178-00018
Reviewer: Jamal Naas/Timothy R. Pettifor
Date: September 28, 2007

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
10.0	87.6

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.08	0.33	0.03	4.38	0.24	3.68

*PM emission factor is filterable ONLY. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
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-
(SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,

See page 7 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas-Fired Dryer
MM BTU/HR <100
HAPs Emissions

Company Name: PQ Corporation
Address City IN Zip: 7th Street and Missouri Avenue, Jeffersonville, IN 47130
Part 70 Permit Renewal Number: T019-23178-00018
Reviewer: Jamal Naas/Timothy R. Pettifor
Date: 7/5/2007

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	9.198E-05	5.256E-05	3.285E-03	7.884E-02	1.489E-04

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

Methodology is the same as page 1.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Material Storage and Handling

Company Name: PQ Corporation
Address City IN Zip: 7th Street and Missouri Avenue, Jeffersonville, IN 47130
Part 70 Permit: T019-23178-00018
Reviewer: Jamal Naas/Timothy R. Pettifor
Date: 9/28/2007

Material Handling	Emission Factor (lbs/ton)	Maximum Quantity of Material (lbs/hour)	Maximum Uncontrolled PM/PM10 Emissions (tons/year)	Collection Efficiency of Baghouses (%)	Maximum Controlled PM Emissions (tons/year)
Soda Ash	3.00	67,000	440.19	99.00%	4.402
Sand	3.00	100,000	657.00	99.00%	6.570
Aluminum Trihydrate	3.00	67,000	440.19	99.00%	4.402
Sodium Aluminosilicate	3.00	70,000	459.90	99.00%	4.599
Sodium Silicate (briquettes)	3.00	67,000	440.19	99.00%	4.402
Total			**2,437.47**		**24.37**

Methodology :

Emission factor from AP-42, Chapter 11.13, Table 11.13-2, SCC 3-05-012-21.
Uncontrolled Emissions (tons/yr) = Maximum Material Throughput (tons/yr) * Emission Factor (lbs/ton) * 1 ton/2000lbs.
Controlled Emissions (tons/yr) = Maximum Material Throughput (tons/yr) * Emission Factor (lbs/ton) * Collection Efficiency (%) * 1 ton/2000 lbs.

Appendix A: Emissions Calculations

Melting Furnace

Company Name: PQ Corporation

Address, City IN Zip: 7th Street and Missouri Avenue, Jeffersonville, IN 47130

Part 70 Permit Renewal #: T019-23178-00018

Reviewer: Jamal Naas/Timothy R. Pettifor

Date: September 28, 2007

Maxiumum Glass Processing Rate 3.5 tons/hour

Heat Input Capacity (MMBtu/hr) 19.7 MMBtu/hour

Natural Gas Fired Furnace*			Natural Gas Combustion**		No. 4 Fuel Oil Combustion***		Oil Fired Furnace****
Pollutant	Emission Factor (lb/ton)	Potential Emissions (tons/yr)	Emission Factor (lb/ton)	Potential Emissions (tons/yr)	Emission Factor (lb/K.gal)	Potential Emissions (tons/yr)	Potential Emissions (tons/yr)
PM	1.4	21.2	1.9	0.2	7.0	4.1	25.1
PM10	1.33	20.1	7.6	0.5	7.0	4.1	23.7
SO2	3.4	51.5	0.6	0.0	75.0	44.3	95.8
VOC	0.2	3.0	5.5	0.4	0.2	0.1	2.7
CO	0.2	3.0	84.0	6.0	5.0	3.0	3.0

NOx potential emissions when utilizing natural gas is equal to 94.17, based on emission factor of 21.5 #/hr. Nox potential emissions when utilizing fuel oil is equal to 63.117, based on emission factor of 14.42 #/hr. Nox emission factors are based on stack tests performed by PQ Corporation in September 1998 and February 1, 1999 for fuel oil and natural gas.

Fuel oil stack test consisted of 80% No. 4 fuel oil and 20% No. 2 fuel oil.

Methodology

*** Natural Gas Fired Furnace**

Emission Factors are from AP 42, Chapter 11.15, Tables 11.15-1, 11.15-2, and 11.15-3 (AP 42 10/86)

Emissions (tons/year) = Maximum Glass Processing Rate (tons/hour) * Emission Factor (lb/ton) * 8760 hours/year)/2000 lb/ton

**** Natural Gas Combustion**

PM emission factor is condensable. Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32 All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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 (Supplement D 3/98)

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

***** No. 4 Fuel Oil Combustion**

1 gallon of #4 Fuel oil has a heating value of 146,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.146 MMBtu

Emission Factors are from AP 42 Tables 1.3-1, 1.3-2 and 1.3-3 (SCC 1-03-004-02/03,1-02-004-02/03, and 1-03-004-04) (AP-42 Supplement E 9/98)

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

****** Oil Fired Furnace**

Emissions (TPY) = Emissions from Natural Gas fired furnace (TPY) - Emissions from Gas Combustion (TPY) + Emissions from No.4 Oil Combustion (TPY)

CO emissions for oil fired furnace were estimated using the potential emissions calculated for the gas fired furnace.

Appendix A: Emissions Calculations
Source-wide PTE Summary

Company Name: PQ Corporation
Address, City IN Zip: 7th Street and Missiouri Avenue, Jeffesonville, IN 47130
Part 70 Permit Renewal Number: T019-23178-00018
Reviewer: Jamal Naas/Timothy R. Pettifor
Date: September 28, 2007

Uncontrolled Potential to Emit

Emission Units	PM10 (TPY)	PM (TPY)	SO2 (TPY)	Nox (TPY)	VOC (TPY)	CO (TPY)
Melting Furnace	23.7	25.1	95.8	94.2	3.00	6.0
Two 17.5 MMBtu/hr Boilers	9.1	7.7	82.1	21.9	0.37	5.5
Dryer	0.33	0.08	0.03	4.38	0.24	3.68
Sand and Soda Ash (S-7 & S-8)	1097.19	1097.19	0.00	0.00	0.00	0.00
Aluminum Trihydrate (S-3)	440.19	440.19	0.00	0.00	0.00	0.00
Sodium Aluminosilicate (S-6 & S-11)	459.9	459.9	0.00	0.00	0.00	0.00
Sodium Silicate (S-12)	440.19	440.19	0.00	0.00	0.00	0.00
Total (Uncontrolled)	2470.6	2470.4	177.93	120.45	3.61	15.18

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	3.00	6.0
Two 17.5 MMBtu/hr Boilers	9.1	7.7			0.37	5.5
Dryer	0.33	0.08			0.24	3.68
Sand and Soda Ash (S-7 & S-8)	28.82	28.82	0.00	0.00	0.00	0.00
Aluminum Trihydrate (S-3)	11.56	11.56	0.00	0.00	0.00	0.00
Sodium Aluminosilicate (S-6 & S-11)	12.09	12.09	0.00	0.00	0.00	0.00
Sodium Silicate (S-12)	11.56	11.56	0.00	0.00	0.00	0.00
Total (Limited)	97.16	96.9	<100	<100	3.61	15.18