



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: August 21, 2007
RE: Colgate-Palmolive Comp. / 019-23802-00003
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06



Mitchell E. Daniels, Jr.
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100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(317) 232-8603
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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

**Colgate-Palmolive Company
1410 South Clark Boulevard
Clarksville, Indiana 47129**

(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. 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 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

Operation Permit No.: F019-23802-00003	
Issued by: Original signed by Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: August 21, 2007 Expiration Date: August 21, 2012

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary dental products manufacturing process.

Source Address:	1410 South Clark Boulevard, Clarksville, Indiana 47129
Mailing Address:	P.O Box CS9, Jeffersonville, Indiana 47131
General Source Phone Number:	(812) 284-8741
SIC Code:	2844, 2841
County Location:	Clark
Source Location Status:	Nonattainment for 8-hour ozone standard Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD, Emission Offset Rules, and Nonattainment NSR 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 2-8-3(c)(3)]

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

- (a) Four boilers constructed in 1993 and 1994, fired by natural gas or #2 fuel oil as alternative fuel, identified as 13-01 to 13-04, with heat input capacity of 60.506 MMBtu per hour each, and venting to stacks S1 and S2.

Under NSPS, Subpart Dc, the four (4) boilers are considered Industrial-Commercial-Institutional Steam Generating Units and are considered to be affected facilities.
- (b) One (1) glycerin refining process, identified as EU 18, constructed in 1940 and modified in 2003 and 2005, consisting of one (1) distillation still and two (2) post stills, with a maximum bio-diesel crude glycerine input of 5,831 lbs/hr, and exhausting through stack 18-S01.
- (c) One (1) dental creme manufacturing process, constructed prior to 1973, using baghouse 40-03 for control, and integral baghouses 40-30 through 40-44, and 40-47 through 40-49, and venting to stacks V7 and V17-V34.
- (d) One (1) lime storage facility at the waste treatment plant, constructed in 1973, using integral baghouse 48-01, and venting internally.

Note: Throughputs for the dental creme manufacturing process and the lime storage facility are included in an IDEM, OAQ confidential file.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Gasoline fuel transfer and dispensing operation handling less than 1,300 gallons per day.
- (b) Storage tanks with a capacity less than or equal to 1,000 gallons and annual throughputs equal to or less than 12,000 gallons.
- (c) Vessel storage of oils.
- (d) Manufacturing activities not resulting in the emission of HAPs.
- (e) Closed loop heating system.
- (f) Activities associated with the treatment of waste water streams with an oil and grease content less than or equal to 1 percent by volume, including one (1) wastewater treatment plant.
- (g) Operations using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (h) Noncontact cooling tower system with forced and induced draft cooling tower.
- (i) Replacement and repair of air filtration equipment.
- (j) Heat exchanger cleaning and repair.
- (k) Process vessel cleaning.
- (l) Paved and unpaved roads and parking lots.
- (m) Asbestos abatement projects regulated by 326 IAC 14-10.
- (n) Purging of gas lines and vessels relating to routine maintenance.
- (o) Equipment used to collect material that might be released during a malfunction, process upset or spill cleanup.
- (p) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (q) On-site emergency response equipment.
- (r) Diesel generators not exceeding 1,600 horsepower.
- (s) Stationary fire pumps.
- (t) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, and electrostatic precipitators with a design grain loading less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 400 actual cubic feet per minute. [326 IAC 6-3-2]
- (u) Purge double block and bleed valves.
- (v) Filter or coalescer media change out.

- (w) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (x) Degreasing operations that do not exceed 145 gallons per 12 consecutive months. [326 IAC 8-3-2]
- (y) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year.
 - (1) Dump stations.
 - (2) Unloading/storage tank vent.
 - (3) Glycerin recovery process.
 - (4) Filling lines for PCP.
 - (5) Ink jet code printing operations.
 - (6) Use of packaging and label adhesives.
 - (7) Storage tanks and mixing vessels greater than 1,000 gallons, that are exempted by emission rate threshold, including the following:
 - (A) Three (3) crude glycerine storage tanks, identified as T996, T997, and T999, constructed in 1929, each with a maximum capacity of 146,975 gallons. [326 IAC 8-9]
 - (B) Two (2) crude glycerine storage tanks, identified as T1487 and T1488, constructed in 1938, with maximum capacities of 15,220 and 27,621 gallons, respectively. [326 IAC 8-9]
 - (8) Fugitive emissions from pumps, valves, flanges, and connections.
 - (9) Fugitive emissions from solid material handling activities.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, F019-23802-00003, 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, 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 2-8-6]

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 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (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 an "authorized individual" 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) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (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

- (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 2-8-4(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.12 Emergency Provisions [326 IAC 2-8-12]

- (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 except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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 2-8-4(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 2-8-3(c)(6) 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 2-8 and any other applicable rules.
 - (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) 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.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

- (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

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

- (a) All terms and conditions of permits established prior to F019-23802-00003 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 2-8-8(a)]
- (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 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (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 2-8-3. 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8 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 Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) 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 approval required by 326 IAC 2-8-11.1 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 2-8-15(b) through (d). 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 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(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 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][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) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][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 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 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 forty percent (40%) 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.4 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.5 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.6 Fugitive Dust Emissions [326 IAC 6-4]

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

C.7 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.8 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.10 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.12 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.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(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 2-8-4][326 IAC 2-8-5(a)(1)]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (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.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

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

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (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.18 General Reporting Requirements [326 IAC 2-8-4(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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.

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) Four boilers constructed in 1993 and 1994, fired by natural gas or #2 fuel oil as alternative fuel, identified as 13-01 to 13-04, with heat input capacity of 60.506 MMBtu per hour each, and venting to stacks S1 and S2.

Under NSPS, Subpart Dc, the four (4) boilers are considered Industrial-Commercial-Institutional Steam Generating Units and are considered to be affected facilities.

(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 2-8-4(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, the particulate emissions from each of the four boilers shall be limited to less than 0.26 pounds per million British thermal units heat input.

This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} \quad \text{Where:} \quad Pt = \text{pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input; and}$$
$$Q = \text{Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input.}$$

D.1.2 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1][326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the four (4) boilers (60.50 MMBtu per hour each) shall be limited to 0.5 pounds per million Btu heat input or a sulfur content of less than or equal to 0.5 percent when using distillate oil.
- (b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.3 Sulfur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

- (a) The sulfur content of the No. 2 fuel oil used in the four (4) boilers (60.50 MMBtu per hour each) shall not exceed 0.36 percent by weight.
- (b) The usage of No. 2 fuel oil and No. 2 fuel oil equivalents in the four (4) boilers (60.50 MMBtu per hour each) shall not exceed 1,541,471 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) For purposes of determining compliance, every MMcf of Natural Gas burned shall be equivalent to 11.74 gallons of No. 2 Fuel oil based on SO₂ emissions, such that the total gallons of No. 2 Fuel oil and No. 2 Fuel oil equivalent input does not exceed the limit specified.

Compliance with these limits will limit source-wide SO₂ emissions to less than 100 tons per year and shall render the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable. This condition will satisfy the requirements of 326 IAC 7-1.1.

D.1.4 Nitrogen Dioxide (NO_x) [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3]

Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

- (a) The usage of natural gas plus natural gas equivalents in the four (4) boilers (60.50 MMBtu per hour each) shall be limited to 1,980 MMcf per twelve (12) consecutive month period, with compliance determined at the end of each month, such that the source-wide NO_x emissions are limited to less than 100 tons per year.
- (b) For purposes of determining compliance every 1,000 gallons of No. 2 fuel oil burned shall be equivalent to 0.20 MMcf of natural gas based on NO_x emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified.

This condition, in combination with emission credits claimed from construction permit 019-2939-00003 through the removal of two 96 MMBtu/hr and one 120 MMBtu/hr natural gas- and fuel oil-fired boilers, will limit the increase of nitrogen dioxide emissions from the boilers to less than 40 tons per year.

Compliance with these limits will limit source-wide NO_x emissions to less than 100 tons per year and shall also render the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control device.

Compliance Determination Requirements

D.1.6 Sulfur Dioxide Emissions and Sulfur Content

Compliance for sulfur dioxide shall be determined utilizing one of the following options.

- (a) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
- (b) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (1) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.7 Visible Emissions Notations

- (a) Visible emission notations of the stack exhaust from the four boilers shall be performed once per 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.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.8 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.2, D.1.3, and D.1.4 the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Conditions D.1.2 and D.1.3 and the NO_x emission limit established in Condition D.1.4.
 - (1) Calendar dates covered in the compliance determination period or calendar quarter;
 - (2) Actual No. 2 fuel oil and fuel oil equivalent usage per month since last compliance determination period or calendar quarter and equivalent SO₂ emissions;
 - (3) Actual natural gas and natural gas equivalent usage per month since last compliance determination period or calendar quarter and equivalent NO_x emissions;
 - (4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period or calendar quarter; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

 - (5) Fuel supplier certifications;
 - (6) The name of the fuel supplier; and
 - (7) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in Condition D.1.6 if applicable. Records shall be maintained for a period of five (5) years and shall be made available upon request by IDEM.

- (c) To document compliance with Condition D.1.7, the Permittee shall maintain a daily record of visible emission notations of each boiler exhaust. 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).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.3 and D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

D.1.10 General Provisions Relating to New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12-1][40 CFR Part 60, Subpart A] [40 CFR Part 60, Subpart Dc]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart Dc.

D.1.11 New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart Dc]

Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Dc specified as follows:

§ 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 Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/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 which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO₂) 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 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/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) 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 D388–77, 90, 91, 95, or 98a, Standard Specification for Classification of Coals by Rank (IBR—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 D396–78, 89, 90, 92, 96, or 98, “Standard Specification for Fuel Oils” (incorporated by reference—see §60.17).

Dry flue gas desulfurization technology means a sulfur dioxide (SO₂) 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 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 SO₂ control 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 40 CFR 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 D1835–86, 87, 91, or 97, "Standard Specification for Liquefied Petroleum Gases" (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 SO₂ emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] 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 D396–78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils" (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 SO₂ 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 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 particulate matter (PM) or SO₂.

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

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of this part, 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 SO₂ in excess of 215 ng/J (0.50 lb/million Btu) 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.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of the following:

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = (K_a H_a + K_b H_b + K_c H_c) / (H_a + H_b + H_c)$$

where:

E_s is the SO₂ emission limit, expressed in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (1.2 lb/million Btu),

K_b is 260 ng/J (0.60 lb/million Btu),

K_c is 215 ng/J (0.50 lb/million Btu),

H_a is the heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [million Btu]

H_b is the heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (million Btu)

H_c is the heat input from the combustion of oil, in J (million Btu).

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(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)(1), (2), or (3), as applicable.

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

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

§ 60.43c Standard for particulate matter

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

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

§ 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 in §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 SO₂ 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) and §60.8, compliance with the percent reduction requirements and SO₂ emission limits under §60.42c is based on the average percent reduction and the average SO₂ 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 SO₂ emission rate are calculated to show compliance with the standard.

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

(1) An adjusted E_{ho} (E_{ho0}) is used in Equation 19–19 of Method 19 to compute the adjusted E_{ao} (E_{ao0}). The E_{ho0} is computed using the following formula:

$$E_{ho0} = [E_{ho} - E_w(1 - X_k)] / X_k$$

where:

E_{ho0} is the adjusted E_{ho}, ng/J (lb/million Btu)

E_{ho} is the hourly SO₂ emission rate, ng/J (lb/million Btu)

E_w is the SO₂ concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9, ng/J (lb/million Btu). 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 is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(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.

(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_2 standards 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)(1), (2), or (3), as applicable.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions 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) and (d) of this section.

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

(2) Method 3 shall be used for gas analysis when applying Method 5, Method 5B, or Method 17.

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

(i) Method 5 may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 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 may be used in Method 17 only if Method 17 is used in conjunction with a wet scrubber system. Method 17 shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B 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 Method 5B, 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 or carbon dioxide measurement shall be obtained simultaneously with each run of Method 5, Method 5B, or Method 17 by traversing the duct at the same sampling location.

(7) For each run using Method 5, Method 5B, or Method 17, the emission rates expressed in ng/J (lb/million Btu) heat input shall be determined using:

- (i) The oxygen or carbon dioxide measurements 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 (appendix A).

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

(d) In place of particulate matter testing with EPA Reference Method 5, 5B, or 17, an owner or operator may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring particulate matter 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 particulate matter emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 shall install, calibrate, maintain, and operate a continuous emission monitoring system and shall comply with the requirements specified in paragraphs (d)(1) through (d)(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 the continuous monitoring system if the owner or operator was previously determining compliance by Method 5, 5B, or 17 performance tests, whichever is later.

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

(6) Compliance with the particulate matter emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data.

(7) At a minimum, valid continuous monitoring system 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 continuous emission monitoring system data shall be used in calculating average emission concentrations even if the minimum continuous emission monitoring system data requirements of paragraph (d)(7) of this section are not met.

(10) The continuous emission monitoring system shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the continuous emission monitoring system required by Performance Specification 11 in appendix B of this part, particulate matter and oxygen (or carbon dioxide) 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 particulate matter, EPA Reference Method 5, 5B, or 17 shall be used.

(ii) For oxygen (or carbon dioxide), EPA reference Method 3, 3A, or 3B, 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 particulate matter emissions data are not obtained because of continuous emission monitoring system 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 to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average

§ 60.46c Emission monitoring for sulfur dioxide

(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 SO₂ standards based on fuel supplier certification, as described under §60.48c(f) (1), (2), or (3), as applicable.

§ 60.47c Emission monitoring for particulate matter

(c) Units that burn only oil that contains no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/MMBtu) heat input or less are not required to conduct PM emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

§ 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, anticipated startup, 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 SO₂ emissions. 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 SO₂ emission 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.

(d) The owner or operator of each affected facility subject to the SO₂ emission 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 SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.43c 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 SO₂ emission rate (nj/J or lb/million Btu), 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 SO₂ emission 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 SO₂ or diluent (oxygen or carbon dioxide) 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.

(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), or (3) 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; and

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

(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.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) One (1) dental creme manufacturing process, constructed prior to 1973, using baghouse 40-03 for control, and integral baghouses 40-30 through 40-44, and 40-47 through 40-49, and venting to stacks V7 and V17-V34.

(d) One (1) lime storage facility at the waste treatment plant, constructed in 1973, using integral baghouse 48-01, and venting internally.

(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 2-8-4(1)]

D.2.1 PM and PM10 Emission Limitation [326 IAC 2-2][326 IAC 2-8-4][326 IAC 2-1.1-5]

The dental creme manufacturing process and the lime storage facility shall comply with the following limits:

I.D No	Description	Gas Flow Rate (acfm)	Allowable Loading (gr/dscf)
Dental Crème Manufacturing			
40-03	N+S DOPP House Vent Baghouse	5966	0.03
40-30	N & S DOPP Dicalcium Phosphate Baghouse	1600	0.03
40-31	N & S DOPP Silica Baghouse	620	0.03
40-32	Fryma 2 Silica Baghouse	620	0.03
40-33	Fryma 2 Dical Baghouse	1600	0.03
40-34	Fryma 1 Silica Baghouse	620	0.03
40-35	Fryma 1 Dical Baghouse	1720	0.03
40-36	Dical Silo S-1 Railcar Unloading Baghouse	3437	0.03
40-37	Dical Silo S-1 Truck Unloading Vent Baghouse	6	0.03
40-38	Fryma Silo S-2 Railcar Unloading Baghouse	3437	0.03
40-39	Fryma Silo S-2 Truck Unloading Vent Baghouse	4	0.03
40-40	Silica Silo S-3 Truck Unloading Vent Baghouse	4	0.03
40-41	Silica Silo S-3 Railcar Unloading Baghouse	666	0.03
40-42	B Dopp Silica Cyclone Bin Baghouse	456	0.03
40-43	B Dopp Silica Bag Dump Station Baghouse	643	0.03
40-44	Fryma Multi-Bag Dump Station Vent Baghouse	643	0.03
40-47	B Dopp Silica Cyclone Baghouse	602	0.03
40-48	Fryma 1 Silica Cyclone Baghouse	666	0.03
40-49	Fryma 2 Silica Cyclone Baghouse	666	0.03
Lime Storage			
48-01	Lime Silo Vent Baghouse	1296	0.03

Compliance with these limits, in combination with the potential to emit of PM10 from all other units will limit the source total PM and PM10 emissions to less than 100 tons per year. This renders the requirements of 326 IAC 2-7, 326 IAC 2-2, and 326 IAC 2-1.1-5 not applicable.

D.2.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e) (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the dental creme manufacturing process and the lime storage facility each shall be limited by the following equation:

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

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The individual limits are included in a IDEM, OAQ confidential file because the process weight rates are considered confidential.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control device.

Compliance Determination Requirements

D.2.4 Particulate Matter (PM)

In order to comply with D.2.1 and D.2.2, the baghouses for particulate control shall be in operation and control emissions from the dental creme manufacturing process and lime storage facility.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.5 Visible Emissions Notations

- (a) Visible emission notations of the baghouse 40-03 stack exhaust shall be performed once per 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.2.6 Parametric Monitoring

The Permittee shall record the pressure drop across baghouse 40-03 used in the dental creme manufacturing process, once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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 or 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 or Exceedances, shall be considered a deviation from this permit.

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.2.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (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 2-8-4(3)] [326 IAC 2-8-16]

D.2.8 Record Keeping Requirements

- (a) To document compliance with Condition D.2.5, the Permittee shall maintain a daily record of visible emission notations of each boiler stack exhaust. 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.2.6, the Permittee shall maintain a daily record of the pressure drop across the baghouse 40-03. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a 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:

- (b) One (1) glycerin refining process, identified as EU 18, constructed in 1940 and modified in 2003 and 2005, consisting of one (1) distillation still and two (2) post stills, with a maximum bio-diesel crude glycerine input of 5,831 lbs/hr, and exhausting through stack 18-S01.

(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 2-8-4(1)]

D.3.1 HAP Emissions [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP), the methanol emissions from the glycerine refining process (EU 18) shall not exceed 1.30 lbs/hr, which is equivalent to 5.70 tons/yr. Combined with the HAP emissions from other existing units, the potential to emit HAP of the entire source is less than 10 tons/yr for a single HAP and less than 25 tons/yr for total HAPs. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable.

Compliance Determination Requirements

D.3.2 Testing Requirements [326 IAC 2-8-5 (a)(1),(4)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform methanol testing for the glycerine refining process (EU 18) within 180 days after switching the raw material input for this process, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing.

SECTION D.4

FACILITY OPERATION CONDITIONS

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

- (t) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, and electrostatic precipitators with a design grain loading less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 400 actual cubic feet per minute. [326 IAC 6-3-2]
- (x) Degreasing operations that do not exceed 145 gallons per 12 consecutive months. [326 IAC 8-3-2]
- (y) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year.
- (7) Storage tanks and mixing vessels greater than 1,000 gallons, that are exempted by emission rate threshold, including the following:
 - (A) Three (3) crude glycerine storage tanks, identified as T996, T997, and T999, constructed in 1929, each with a maximum capacity of 146,975 gallons. [326 IAC 8-9]
 - (B) Two (2) crude glycerine storage tanks, identified as T1487 and T1488, constructed in 1938, with maximum capacities of 15,220 and 27,621 gallons, respectively. [326 IAC 8-9]

(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 2-8-4(1)]

D.4.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This applies to the grinding and machining operations listed above.

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

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

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.4.3 Volatile Organic Compounds (VOC) [326 IAC 8-9]

Pursuant to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels), the Permittee shall keep the following records over the life of each VOC storage vessel:

- (a) The vessel identification number;
- (b) The vessel dimensions
- (c) The vessel capacity
- (d) A description of the emission control equipment for each vessel.

D.4.4 Reporting Requirements

The Permittee shall submit a one-time report containing the information in Condition D.4.3, to the address listed in Section C- General Reporting Requirements of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Colgate-Palmolive Company
Source Address: 1410 South Clark Boulevard, Clarksville, Indiana 47129
Mailing Address: P.O Box CS9, Jeffersonville, IN 47131
FESOP Permit No.: F019-23802-00003

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:

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**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Colgate-Palmolive Company
Source Address: 1410 South Clark Boulevard, Clarksville, Indiana 47129
Mailing Address: P.O Box CS9, Jeffersonville, IN 47131
FESOP Permit No.: F019-23802-00003

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 Describe:
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
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
SEMI- ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Colgate-Palmolive Company
Source Address: 1410 South Clark Boulevard, Clarksville, Indiana 47129
Mailing Address: P.O Box CS9, Jeffersonville, IN 47131
FESOP Permit No.: F019-23802-00003

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

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

Signature:

Printed Name:

Title/Position:

Date:

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Colgate-Palmolive Company
 Source Address: 1410 South Clark Boulevard, Clarksville, Indiana 47129
 Mailing Address: P.O Box CS9, Jeffersonville, IN 47131
 FESOP Permit No.: F019-23802-00003
 Facility: Four (4) boilers with a heat input capacity of 60.506 MMbtu/hr each
 Parameter: Natural Gas and equivalent usage limit to limit NOx emissions.
 Limit: The usage of natural gas and natural gas equivalents in the boilers shall not exceed 1,980 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in condition D.1.4 (b) shall be used.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Natural Gas and equivalent usage. This Month (gallons)	Natural Gas and equivalent usage Previous 11 Months. (gallons)	12 Month Total Natural Gas and equivalent usage. (gallons)
Month 1			
Month 2			
Month 3			

- 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

FESOP Quarterly Report

Source Name: Colgate-Palmolive Company
 Source Address: 1410 South Clark Boulevard, Clarksville, Indiana 47129
 Mailing Address: P.O Box CS9, Jeffersonville, IN 47131
 FESOP Permit No.: F019-23802-00003
 Facility: Four (4) boilers with a heat input capacity of 60.506 MMbtu/hr each
 Parameter: No. 2 fuel oil and equivalent usage limit to limit SO₂ emissions
 Limit: The usage of No. 2 fuel oil with a sulfur content of 0.36% and No. 2 fuel oil equivalents in the boilers shall be limited to 1,541,471 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in condition D.1.3 (c) shall be used.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	No. 2 fuel oil and equivalent usage. This Month (gallons)	No. 2 fuel oil and equivalent usage Previous 11 Months. (gallons)	No. 2 fuel oil and equivalent usage. (gallons)
Month 1			
Month 2			
Month 3			

- 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
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Colgate-Palmolive Company
 Source Address: 1410 South Clark Boulevard, Clarksville, Indiana 47129
 Mailing Address: P.O Box CS9, Jeffersonville, IN 47131
 FESOP Permit No.: F019-23802-00003

Months: _____ **to** _____ **Year:** _____

<p>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".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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 Federally Enforceable State Operating Permit
Renewal

Source Background and Description

Source Name:	Colgate-Palmolive Company
Source Location:	1410 South Clark Boulevard, Clarksville, IN, 47129
County:	Clark
SIC Code:	2844, 2841
Permit Renewal No.:	F019-23802-00003
Permit Reviewer:	Tanya White / EVP

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Colgate-Palmolive Company relating to the operation of a dental products manufacturing process.

History

On October 23, 2006, Colgate-Palmolive Company submitted an application to the OAQ requesting to renew its operating permit. Colgate-Palmolive Company was issued a FESOP Renewal on July 29, 2002.

Permitted Emission Units and Pollution Control Equipment

- (a) Four boilers constructed in 1993 and 1994, fired by natural gas or #2 fuel oil as alternative fuel, identified as 13-01 to 13-04, with heat input capacity of 60.506 MMBtu per hour each, and venting to stacks S1 and S2.

Under NSPS, Subpart Dc, the four (4) boilers are considered Industrial-Commercial-Institutional Steam Generating Units and are considered to be affected facilities.

- (b) One (1) glycerin refining process, identified as EU 18, constructed in 1940 and modified in 2003 and 2005, consisting of one (1) distillation still and two (2) post stills, with a maximum bio-diesel crude glycerine input of 5,831 lbs/hr, and exhausting through stack 18-S01.
- (c) One (1) dental creme manufacturing process, constructed prior to 1973, using baghouse 40-03 for control, and integral baghouses 40-30 through 40-44, and 40-47 through 40-49, and venting to stacks V7 and V17-V34.
- (d) One (1) lime storage facility at the waste treatment plant, constructed in 1973, using integral baghouse 48-01, and venting internally.

Note: Throughputs for the dental creme manufacturing process and the lime storage facility are included in an IDEM, OAQ confidential file.

Emission Units and Pollution Control Equipment Removed From the Source

- (a) One (1) cleanser manufacturing process, constructed prior to 1973, using integral baghouses 38-01 through 38-03, and 38-05 through 38-12, and venting to stacks V3 -V6 and V10-V16.

- (b) One (1) base plant sulfonation process, constructed prior to 1973, using two electrostatic precipitators and a scrubber for control and venting to stack S8.

Insignificant Activities

- (a) Gasoline fuel transfer and dispensing operation handling less than 1,300 gallons per day.
- (b) Storage tanks with a capacity less than or equal to 1,000 gallons and annual throughputs equal to or less than 12,000 gallons.
- (c) Vessel storage of oils.
- (d) Manufacturing activities not resulting in the emission of HAPs.
- (e) Closed loop heating system.
- (f) Activities associated with the treatment of waste water streams with an oil and grease content less than or equal to 1 percent by volume, including one (1) wastewater treatment plant.
- (g) Operations using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (h) Noncontact cooling tower system with forced and induced draft cooling tower.
- (i) Replacement and repair of air filtration equipment.
- (j) Heat exchanger cleaning and repair.
- (k) Process vessel cleaning.
- (l) Paved and unpaved roads and parking lots.
- (m) Asbestos abatement projects regulated by 326 IAC 14-10.
- (n) Purging of gas lines and vessels relating to routine maintenance.
- (o) Equipment used to collect material that might be released during a malfunction, process upset or spill cleanup.
- (p) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (q) On-site emergency response equipment.
- (r) Diesel generators not exceeding 1,600 horsepower.
- (s) Stationary fire pumps.
- (t) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, and electrostatic precipitators with a design grain loading less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 400 actual cubic feet per minute.
- (u) Purge double block and bleed valves.

- (v) Filter or coalescer media change out.
- (w) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (x) Degreasing operations that do not exceed 145 gallons per 12 consecutive months.
[326 IAC 8-3-2]
- (y) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year.
 - (1) Dump stations.
 - (2) Unloading/storage tank vent.
 - (3) Glycerin recovery process.
 - (4) Filling lines for PCP.
 - (5) Ink jet code printing operations.
 - (6) Use of packaging and label adhesives.
 - (7) Storage tanks and mixing vessels greater than 1,000 gallons, that are exempted by emission rate threshold, including the following:
 - (A) Three (3) crude glycerine storage tanks, identified as T996, T997, and T999, constructed in 1929, each with a maximum capacity of 146,975 gallons.
 - (B) Two (2) crude glycerine storage tanks, identified as T1487 and T1488, constructed in 1938, with maximum capacities of 15,220 and 27,621 gallons, respectively.
 - (8) Fugitive emissions from pumps, valves, flanges, and connections.
 - (9) Fugitive emissions from solid material handling activities.

Existing Approvals

Since the issuance of the FESOP 019-14122-00003 on July 29, 2002, the source has also constructed or has been operating under the following approvals:

- (a) First Administrative Amendment No. 019-19522-00003 issued on September 24, 2004;
- (b) Minor Permit Revision No. 019-20045-00003 issued on February 02, 2005; and
- (c) Second Administrative Amendment No. 019-23311-00003 issued on September 24, 2006.

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.

Air Pollution Control Justification as an Integral Part of the Process

The applicant has submitted the following justification such that the baghouses 40-30 through 40-44, 40-47 through 40-49, and 48-01 be considered as an integral part of the dental creme manufacturing process, and lime storage facility:

- (a) These baghouses operate as part of the pneumatic conveying transfer process. The baghouses create the vacuum pulling in all material as it progresses down the line. The collected material falls directly into the silo or reactor. The process cannot operate without the baghouses.

IDEM, OAQ has evaluated the justifications and agreed that the listed baghouses will be considered as an integral part of the dental creme manufacturing process, and lime storage facility. Therefore, the permitting level will be determined using the potential to emit after the integral baghouses. Operating conditions in the proposed permit will specify that the listed baghouses shall operate at all times when the dental creme manufacturing process and lime storage facility are in operation.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Clark County

Pollutant	Status
PM ₁₀	Attainment
PM _{2.5}	Nonattainment
SO ₂	Attainment
NOx	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (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 PM₁₀ 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 (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone standards. Clark County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

- (c) Clark County has been classified as attainment or unclassifiable in Indiana for PM10, SO₂, NO_x, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) 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	Greater than 250
PM-10	Greater than 250
SO ₂	Greater than 250
VOC	Less than 100
CO	Less than 100
NO _x	Greater than 100, Less than 250

HAPs	tons/year
Arsenic	Less than 10
Benzene	Less than 10
Beryllium	Less than 10
Cadmium	Less than 10
Chromium	Less than 10
Dichlorobenzene	Less than 10
Formaldehyde	Less than 10
Hexane	Less than 10
Lead	Less than 10
Manganese	Less than 10
Mercury	Less than 10
Methanol	Less than 10
Nickel	Less than 10
Selenium	Less than 10
Toluene	Less than 10
HAP from waste water treatment plant:	Less than 10
Total HAPs	Less than 10

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, SO₂, and NO_x is equal to or greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their PM10, SO₂, and NO_x emissions to less than Title V levels, therefore the source will be issued a FESOP.
- (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.

Fugitive Emissions

Since this type of operation is in 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 2002 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM2.5	3
PM-10	7
SO ₂	0
VOC	16
CO	12
NO ₂	14

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/emission unit	Potential To Emit (tons/year)						Total HAPs
	PM	PM-10	SO ₂	VOC	CO	NO _x	
Boilers	1.88	7.52	39.40	5.45	83.16	99.00	2.00
Glycerin Refining Process	-	-	-	5.70	-	-	5.70
Storage tanks (insignificant)	-	-	-	0.10	-	-	0.10
Wastewater treatment plant (insignificant)	-	-	-	1.16	-	-	1.14
Dental creme manufacturing process and lime storage facility	28.46	28.46	-	-	-	-	-
Total Emissions	30.34	35.98	39.40	12.41	83.16	99.00	8.94

Federal Rule Applicability

- (a) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not included in this permit. These requirements apply to a Part 70 source that involves a pollutant-specific emissions unit (PSEU), as defined in 40 CFR 64.1, which meets the following criteria:
- (1) The unit is subject to an emission limitation or standard for an applicable regulated air pollutant;
 - (2) The unit uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard; and
 - (3) The unit has a potential to emit before controls equal to or greater than the applicable Part 70 major source threshold for the regulated pollutant.

As a FESOP source, this source has accepted federally enforceable limits such that the requirements of 326 IAC 2-7 (Part 70) do not apply. Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this source and not included in the permit.

- (b) The four boilers at this source are subject to the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 326 IAC 12, (40 CFR Part 60, Subpart Dc) because the four boilers were constructed after June 9, 1989. The specific facilities subject to this rule include the following:
- (1) Four boilers constructed in 1993 and 1994, fired by natural gas or #2 fuel oil as alternative fuel, identified as 13-01 to 13-04, with heat input capacity of 60.506 MMBtu per hour each, and venting to stacks S1 and S2.

Non applicable portions of the NSPS will not be included in the permit. The four boilers are subject to the following portions of 40 CFR Part 60, Subpart Dc:

- (1) 40 CFR 60.40c
- (2) 40 CFR 60.41c
- (3) 40 CFR 60.42c (d)
- (4) 40 CFR 60.42c (e)(2)
- (5) 40 CFR 60.42c (g)
- (6) 40 CFR 60.42c (h)(1)
- (7) 40 CFR 60.42c (i)
- (8) 40 CFR 60.43c (c)
- (9) 40 CFR 60.43c (d)
- (10) 40 CFR 60.44c (a)
- (11) 40 CFR 60.44c (b)
- (12) 40 CFR 60.44c (c)
- (13) 40 CFR 60.44c (e)
- (14) 40 CFR 60.44c (g)
- (15) 40 CFR 60.44c (h)
- (16) 40 CFR 60.44c (j)
- (17) 40 CFR 60.45c (a)
- (18) 40 CFR 60.45c (d)
- (19) 40 CFR 60.46c (e)
- (20) 40 CFR 60.47c (c)
- (21) 40 CFR 60.48c (a)
- (22) 40 CFR 60.48c (b)
- (23) 40 CFR 60.48c (d)

- (24) 40 CFR 60.48c (e), except for (e)(7)-(e)(10)
- (25) 40 CFR 60.48c (f)(1)
- (26) 40 CFR 60.48c (h)
- (27) 40 CFR 60.48c (i)
- (28) 40 CFR 60.48c (j)

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated as 326 IAC 12-1-1, apply to the four boilers except when otherwise specified in 40 CFR Part 60, Subpart Dc.

- (c) The existing crude glycerine storage tanks identified as T996, T997, T999, T1487 and T1488 are not subject to the New Source performance Standards, 326 IAC 12, (40 CFR Part 60.110, Subpart K, 40 CFR Part 60.110a, Subpart Ka or 40 CFR Part 60.110b, Subpart Kb) "Standards of Performance for Volatile Organic Liquid Storage Vessels" because these tanks do not store petroleum liquids. Therefore, these requirements are not included in the permit.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

State Rule Applicability - Entire Source

326 IAC 2-1.1-5 (Non-attainment NSR)

Clark County has been designated as non-attainment for PM 2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM2.5 Non-attainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM 2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 non-attainment major NSR program as a surrogate to address the requirements of non-attainment major NSR for the PM2.5 NAAQS. A major source in a non-attainment area is a source that emits or has the potential to emit 100 tpy of any regulated pollutant. Colgate-Palmolive Company has a limited potential to emit of PM10 below 100 tpy. Therefore, assuming that PM10 emissions represent PM2.5 emissions, Non-attainment NSR does not apply.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The dental creme manufacturing process, and the lime storage facility, were all constructed in or prior to 1973. At this time emissions were above 250 tons per year of a criteria pollutant so upon promulgation of the PSD rules in August 7, 1977, the source was considered a major source under PSD. In 1993, the source applied for a construction permit to remove two 96 MMBtu/hr and one 120 MMBtu/hr natural gas- and fuel oil fired boilers and to construct four 60.506 MMBtu/hr natural gas- and fuel oil-fired boilers. The potential emissions from this modification were over the PSD major thresholds. For this reason, CP019-2939-00003, issued June 4, 1993, included limits to ensure that emission increases from the modification were below the PSD thresholds for each criteria pollutant. In 1996, when IDEM required sources to submit an application for a Title V or FESOP, the source applied for a FESOP. F019-5535-00002, issued December 10, 1996, limited emissions of all criteria pollutants to less than 100 tons per year. Therefore the source is no longer a major source under PSD. The limits ensuring that the source is a minor PSD source are included below:

- (a) The input of natural gas to the 4 boilers shall be limited to 1980 million cubic feet per twelve (12) consecutive month period. For the purposes of determining compliance, every 1000 gallons of No. 2 fuel oil burned shall be equivalent to 0.20 million cubic feet of natural gas based on nitrogen oxides emissions. This condition, in combination with emission credits claimed from construction permit 019-2939-00003 through the removal of two 96 MMBtu/hr and one 120 MMBtu/hr natural gas- and fuel oil-fired boilers, will limit the increase of nitrogen dioxide emissions from the boilers to less than 40 tons per year. Therefore, the boilers are not subject to the requirements of 326 IAC 2-2. This limit will also limit source-wide NO_x emissions to less than 100 tons per year.
- (b) The input of No. 2 fuel oil to the 4 boilers shall be limited to 1,541,471 gallons per twelve (12) consecutive month period. This is equivalent to 39.4 tons of sulfur dioxide per year from burning fuel oil. The No. 2 fuel oil shall not exceed 0.36 percent sulfur content. These limits will limit sulfur dioxide emissions to less than 40 tons per 12 consecutive months; therefore, the boilers are not subject to the requirements of 326 IAC 2-2. This condition will satisfy the requirements of 326 IAC 7-1.1. This will also limit source-wide SO₂ emissions to less than 100 tons per year.
- (c) PM and PM₁₀ emissions from the dental creme manufacturing process and the lime storage facility each shall be limited to 0.03 grain per dry standard cubic foot. The flowrates are shown in the FESOP section below (326 IAC 2-8-4 (FESOP)). These limits are equivalent to 28.46 tons per year of PM and PM₁₀ emissions from the dental creme manufacturing process and the lime storage facility for a source-wide limit of less than 100 tons per year of PM and PM₁₀.

326 IAC 2-3 (Emission Offset)

Clark County has been designated as basic nonattainment for the 8-hour ozone standard. This source is not considered a major source because the potential to emit of NO_x is limited to less than 100 tons per year and the unrestricted VOC emissions are less than 100 tons per year as described under the FESOP section below. Therefore, this source has been operating as a minor source pursuant to 326 IAC 2-3, Emission Offset.

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake or Porter counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-8-4 (FESOP)

This source is subject to 326 IAC 2-8-4 (FESOP). Pursuant to this rule, the following limits shall apply:

- (a) The usage of natural gas plus natural gas equivalents in the four (4) boilers (60.50 MMBtu per hour each) shall be limited to 1,980 MMcf per twelve (12) consecutive month period, with compliance determined at the end of each month, such that the source-wide NO_x emissions are limited to less than 100 tons per year.

For purposes of determining compliance, every 1,000 gallons of No. 2 fuel oil burned shall be equivalent to 0.20 MMcf of natural gas based on NO_x emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified.

- (b) The sulfur content of the No. 2 fuel oil used in the four (4) boilers (60.50 MMBtu per hour each) shall not exceed 0.36 percent by weight.

- (c) The usage of No. 2 fuel oil and No. 2 fuel oil equivalents in the four (4) boilers (60.50 MMBtu per hour each) shall not exceed 1,541,471 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month, such that the source-wide SO₂ emissions are limited to less than 100 tons per year.

For purposes of determining compliance, every MMcf of Natural Gas burned shall be equivalent to 11.74 gallons of No. 2 Fuel oil based on SO₂ emissions, such that the total gallons of No. 2 Fuel oil and No. 2 Fuel oil equivalent input does not exceed the limit specified.

- (d) PM and PM-10 emissions from the dental creme manufacturing process and the lime storage facility shall be limited to 0.03 grain per dry standard cubic foot and the flow rates shown below:

I.D No	Description	Gas Flow Rate (acfm)	Allowable Loading (gr/dscf)
Dental Crème Manufacturing			
40-03	N+S DOPP House Vent Baghouse	5966	0.03
40-30	N & S DOPP Dicalcium Phosphate Baghouse	1600	0.03
40-31	N & S DOPP Silica Baghouse	620	0.03
40-32	Fryma 2 Silica Baghouse	620	0.03
40-33	Fryma 2 Dical Baghouse	1600	0.03
40-34	Fryma 1 Silica Baghouse	620	0.03
40-35	Fryma 1 Dical Baghouse	1720	0.03
40-36	Dical Silo S-1 Railcar Unloading Baghouse	3437	0.03
40-37	Dical Silo S-1 Truck Unloading Vent Baghouse	6	0.03
40-38	Fryma Silo S-2 Railcar Unloading Baghouse	3437	0.03
40-39	Fryma Silo S-2 Truck Unloading Vent Baghouse	4	0.03
40-40	Silica Silo S-3 Truck Unloading Vent Baghouse	4	0.03
40-41	Silica Silo S-3 Railcar Unloading Baghouse	666	0.03
40-42	B Dopp Silica Cyclone Bin Baghouse	456	0.03
40-43	B Dopp Silica Bag Dump Station Baghouse	643	0.03
40-44	Fryma Multi-Bag Dump Station Vent Baghouse	643	0.03
40-47	B Dopp Silica Cyclone Baghouse	602	0.03
40-48	Fryma 1 Silica Cyclone Baghouse	666	0.03
40-49	Fryma 2 Silica Cyclone Baghouse	666	0.03
Lime Storage			
48-01	Lime Silo Vent Baghouse	1296	0.03

This limits the PM10 emissions from the dental manufacturing process and the lime storage to 28.46 tons per year such that when combined with the potential to emit PM10 from all other units the source-wide total potential to emit of PM10 is less than 100 tons per year.

- (e) The methanol emissions from the glycerine refining process shall not exceed 1.30 lbs/hr, which is equivalent to 5.70 tons/yr. Combined with the HAP emissions from other existing units, the potential to emit HAP of the entire source is less than 10 tons/yr for a single HAP and less than 25 tons/yr for total HAPs.

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 the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) 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.

The source is located in Clark County but not located in Jeffersonville Township and is therefore not subject to 326 IAC 5-1-2(2).

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2(1), (2) or (3).

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

This source is not subject to 326 IAC 6-5 for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new sources constructed after December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved. The source was constructed in 1973; therefore, the requirements of 326 IAC 6-5 do not apply.

State Rule Applicability – Individual Facilities

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

The operation of this stationary dental products manufacturing process will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The four (4) boilers, identified as 13-01 through 13-04, are subject to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) because they were constructed after September 21, 1983, the applicability date for this rule. Pursuant to 326 IAC 6-2-4, the particulate emissions from each of the four boilers shall be limited to less than 0.26 pounds per million British thermal units heat input. This limit was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{(242)^{0.26}} = 0.26lb / MMbtu$$

Where Pt = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)

Q = total source maximum operating capacity

(Q = 60.506 + 60.506 + 60.506 + 60.506 = 242 MMBtu/hr)

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

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the dental creme manufacturing process and lime storage facility each shall be limited by the following equation:

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

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The individual limits are included in an IDEM, OAQ confidential file because the process weight rates are considered confidential.

- (b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This applies to the grinding and machining operations.

326 IAC 6.5-1 Particulate Emission Limitations

The source is not subject to 326 IAC 6.5-1 (Particulate Emission Limitations) since the source is limiting PM emissions to less than one hundred (100) tons per year, and the source's actual PM emissions are less than ten (10) tons per year. The source is not subject to 326 IAC 6.5-2-3 because the units listed in 326 IAC 6.5-2-3 are no longer present at the source.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The sulfur dioxide emissions from the four (4) boilers burning No. 2 fuel oil shall be limited to 0.5 lb/MMBtu heat input. This equates to a fuel oil sulfur content limit of 0.5%. Therefore, the sulfur content of the fuel must be less than or equal to 0.5% in order to comply with this rule (See Appendix A, Page 6 of 6 for detailed calculations). The source will be able to comply with this rule by using No. 2 fuel oil with a sulfur content of 0.36% or less.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

This source is subject to 326 IAC 7-2-1 (Reporting Requirements). This rule requires the source to submit to the Office of Air Quality upon request records of sulfur content, heat content, fuel consumption, and sulfur dioxide emission rates based on a calendar-month average.

326 IAC 8-1-6 (BACT)

This rule applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compound (VOC) emissions of 25 tons per year or more, and which are not otherwise regulated by another provision of Article 8.

The dental products manufacturing process was constructed in 1973 predating this rule, and is therefore not subject to 326 IAC 8-1-6.

The glycerine refining process (EU 18) was modified after January 1, 1980 and has the potential VOC emissions less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-3-2 (Volatiles Organic Compounds)

The organic solvent degreasing operations are subject to 326 IAC 8-3-2 because they were installed after 1980. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations installed after January 1, 1980, 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 (a) (Volatile Organic Compounds)

The organic degreasing operations are not subject to 326 IAC 8-3-5 because they do not meet the applicability described in 326 IAC 8-3-5(b)(1).

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

Pursuant to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels), the permittee shall keep the following records over the life of each VOC storage vessel:

- (a) The vessel identification number;
- (b) The vessel dimensions;
- (c) The vessel capacity; and
- (d) A description of the emission control equipment for each vessel.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

The compliance determination requirements applicable to the source are as follows:

There is no IDEM approved stack test data available for the HAP emissions from the glycerine refining process (EU 18) at this source. In order to demonstrate compliance with the FESOP limit, the Permittee was required to perform methanol testing for the glycerine refining process (EU 18) within 180 days after switching the raw material input to this process, utilizing methods as approved by the Commissioner.

Previous stack tests to comply with this requirement were conducted as follows:

- (a) The Glycerin Refining Process (EU 18) was tested for methanol on November 2, 2005 and was in compliance.

Additional testing is not required at this source since no single facility emits more than 40% of the total PTE before controls for the "major" pollutants.

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

1. The four boilers have applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations of the stack exhaust from the four boilers shall be performed once per 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.

These monitoring conditions are necessary because the boilers must operate properly to ensure compliance with 326 IAC 2-8 (FESOP), 326 IAC 12, 40 CFR 60, Subpart Dc, and to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Non-attainment NSR) not applicable.

2. The dental creme manufacturing process and the lime storage facility have applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations of the baghouse 40-03 stack exhaust shall be performed once per 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.
- (f) The Permittee shall record the pressure drop across baghouse 40-03 used in the dental creme manufacturing process, once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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 or 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 or Exceedances, shall be considered a deviation from this permit.
- (g) 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.
- (h) In the event that bag failure has been observed:
 - (1) 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).
 - (2) 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.

These monitoring conditions are necessary because the baghouses for dental creme manufacturing process must operate properly to ensure compliance with 326 IAC 2-8 (FESOP) and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Non-attainment NSR) not applicable.

Recommendation

The staff recommends to the Commissioner that the FESOP 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 October 23, 2006.

Conclusion

The operation of this stationary dental products manufacturing process shall be subject to the conditions of the attached FESOP Renewal No. 019-23802-00003.

Company Name:
 Plant Location:
 County:
 Permit Reviewer:

Colgate-Palmolive Company
 1410 South Clark Boulevard, Clarksville
 Clark
 Tanya White / EVP

**** Boilers ****

Four boilers with heat input capacity of 60.506 Mmbtu per hour each.

The following calculations determine the amount of emissions created by **natural gas** combustion, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1 and 1.4-2.

Criteria Pollutant:	242.0 MMBtu/hr * 8,760 hr/yr	* Ef (lb/MMcf) = (ton/yr)
	1000 Btu/cf * 2,000 lb/ton	
P M:	1.9 lb/MMcf =	2.01 ton/yr
P M-10:	7.6 lb/MMcf =	8.06 ton/yr
S O 2:	0.6 lb/MMcf =	0.64 ton/yr
N O x:	100.0 lb/MMcf =	106.01 ton/yr
V O C:	5.5 lb/MMcf =	5.83 ton/yr
C O:	84.0 lb/MMcf =	89.05 ton/yr

The following calculations determine the amount of emissions created by the combustion of **No. 2 fuel oil** @ 0.36 % sulfur, from the boilers, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-2, and 1.3-3.

Criteria Pollutant:	242.0 MMBtu/hr * 8,760 hr/yr	* Ef (lb/1,000 gal) = (ton/yr)
	140,000 Btu/ gal * 2,000 lb/ton	
P M:	2.0 lb/1000 gal =	15.14 ton/yr
P M-10:	3.3 lb/1000 gal =	24.99 ton/yr
S O 2:	51.1 lb/1000 gal =	387.08 ton/yr
N O x:	20.0 lb/1000 gal =	151.44 ton/yr
V O C:	0.34 lb/1000 gal =	2.57 ton/yr
C O:	5.0 lb/1000 gal =	37.86 ton/yr

The maximum potential emissions from the boilers due to fuel combustion are the following:

Criteria Pollutant:		Worst Case Fuel
P M:	15.14 ton/yr	No. 2 fuel Oil
P M-10:	24.99 ton/yr	No. 2 fuel Oil
S O 2:	387.08 ton/yr	No. 2 fuel Oil
N O x:	151.44 ton/yr	No. 2 fuel Oil
V O C:	5.83 ton/yr	Natural Gas
C O:	89.05 ton/yr	Natural Gas

**** Boilers - Limited Emissions ****

In order to qualify for the FESOP program, this source must limit NOx, and SO2, emissions to

99.00 tons/year

The following calculations determine the amount of emissions created by Natural Gas combustion based on a fuel usage limitation of 1,980,000 cf/yr:

Natural Gas:	<u>1,980</u> MMcf/yr	* Ef (lb/MMcf) = (ton/yr)
	2,000 lb/ton	
P M:	1.9 lb/MMcf =	1.88 ton/yr
P M-10:	7.6 lb/MMcf =	7.52 ton/yr
S O 2:	0.6 lb/MMcf =	0.59 ton/yr
N O x:	100.0 lb/MMcf =	99.00 ton/yr
V O C:	5.5 lb/MMcf =	5.45 ton/yr
C O:	84.0 lb/MMcf =	83.16 ton/yr

The following calculations determine the amount of emissions created by No. 2 fuel oil @ 0.36 % sulfur based on a fuel usage limitation of 1,541,471 gal/yr:

No. 2 Fuel Oil:	<u>1,541</u> kgal/yr	* Ef (lb/1,000 gal) = (ton/yr)
	2,000 lb/ton	
P M:	2.0 lb/1000 gal =	1.54 ton/yr
P M-10:	3.3 lb/1000 gal =	2.54 ton/yr
S O 2:	51.1 lb/1000 gal =	39.40 ton/yr
N O x:	20.0 lb/1000 gal =	15.41 ton/yr
V O C:	0.34 lb/1000 gal =	0.26 ton/yr
C O:	5.0 lb/1000 gal =	3.85 ton/yr

Criteria Pollutant:		Worst Case Fuel
P M:	1.88 ton/yr	Natural Gas
P M-10:	7.52 ton/yr	Natural Gas
S O 2:	39.40 ton/yr	No. 2 fuel Oil
N O x:	99.00 ton/yr	Natural Gas
V O C:	5.45 ton/yr	Natural Gas
C O:	83.16 ton/yr	Natural Gas

**** Fuel Usage Limitations ****

Fuel: Natural Gas

$$\frac{99.00 \text{ tons NOx/yr limited}}{106.01 \text{ tons NOx/yr potential}} \times 2120.13 \frac{\text{MMcf}}{\text{year potential}} = 1980.00 \frac{\text{MMcf}}{\text{year limited}}$$

Fuel: No. 2 Fuel Oil

$$\frac{39.40 \text{ tons SO2/yr limited}}{387.08 \text{ tons SO2/yr potential}} \times 15143.79 \frac{\text{Kgals}}{\text{year potential}} = 1541.47 \frac{\text{Kgals}}{\text{year limited}}$$

$$= 215805.95 \frac{\text{MMBtu}}{\text{year limited}}$$

**** Fuel Equivalence Limitations ****

Fuel equivalence limit for Natural Gas (NG) based on SO2 emissions from No. 2 F.O:

$$\frac{0.636 \text{ NG potential emissions (ton/yr)}}{2120.13 \text{ NG potential usage (MMcf/yr)}} / \frac{387.08 \text{ No. 2 F.O potential emissions (ton/yr)}}{15143.79 \text{ No. 2 F.O potential usage (Kgal/yr)}}$$

$$0.01174 \frac{\text{Kgal No.2 F.O burned}}{\text{MMcf NG burned}}$$

Fuel equivalence limit for # 2 F.O based on NOx emissions from Natural Gas Combustion:

$$\frac{151.44 \text{ No. 2 F.O. potential emissions (ton/yr)}}{15143.79 \text{ No. 2 F.O potential usage (Kgal/yr)}} / \frac{106.01 \text{ NG potential emissions (ton/yr)}}{2120.13 \text{ NG potential usage (MMcf/yr)}}$$

$$0.200 \frac{\text{MMcf NG burned}}{\text{Kgal #2 F.O. burned}}$$

Fuel equivalence limit for # 2 F.O based on PM emissions from Natural Gas Combustion:

$$\frac{15.14 \text{ No. 2 F.O. potential emissions (ton/yr)}}{15143.79 \text{ No. 2 F.O potential usage (Kgal/yr)}} / \frac{2.01 \text{ NG potential emissions (ton/yr)}}{2120.13 \text{ NG potential usage (MMcf/yr)}}$$

$$1.053 \frac{\text{MMcf NG burned}}{\text{Kgal #2 F.O. burned}}$$

Fuel equivalence limit for # 2 F.O based on PM 10 emissions from Natural Gas Combustion:

$$\frac{24.99 \text{ No. 2 F.O. potential emissions (ton/yr)}}{15143.79 \text{ No. 2 F.O potential usage (Kgal/yr)}} / \frac{8.06 \text{ NG potential emissions (ton/yr)}}{2120.13 \text{ NG potential usage (MMcf/yr)}}$$

$$0.434 \frac{\text{MMcf NG burned}}{\text{Kgal #2 F.O. burned}}$$

**** Glycerin Refining Process ****

Process Description:

Maximum Process Rate: 5,831 lbs/hr of bio-diesel crude glycerine input
 Maximum Methanol Content: 0.10% by weight (provided by the source)
 Methanol Loss to Air: 22.30% of the methanol input (provided by the source, based on the trial results)

Potential to Emit VOC/HAP:

Hourly VOC/HAP Emissions = 5,831 lbs/hr x 0.1% x 22.3 % = **1.30 lbs / hr**
 Annual VOC/HAP Emissions = 1.30 lbs/hr x 8760 hrs/yr x 1 ton/2000 lbs = **5.70 tons / yr**

- * Potential to Emit VOC/HAP from the storage tank = **0.1 tons / yr**
- * Potential to Emit VOC from the wastewater treatment plant = **1.16 tons / yr**
- * Potential to Emit HAP from the wastewater treatment plant = **1.14 tons / yr**

* These emissions were estimated by the applicant using EPA TANKs software, version 4.0 and BASTE Model version 3.
 These calculations have been verified and found to be accurate and correct.

**** Dental Cream Manufacturing and Lime Storage ****

PM Emission Calculations

I.D No	Description	Gas Flow Rate (acfm)	Max Outlet Grain Loading (gr/dscf)	Allowable Loading (gr/dscf)	Design /Minimum Removal Efficiency (%)	Integral Baghouse (Y or N)	Uncontrolled Potential to Emit (tpy)*	Controlled Potential to Emit (tpy)	Allowable Potential to Emit (tpy)
Dental Crème Manufacturing									
40-03	N+S DOPP House Vent Baghouse	5966	0.02	0.03	99.500%	N	895.92	4.48	6.72
40-30	N & S DOPP Dicalcium Phosphate Baghouse	1600	0.02	0.03	99.998%	Y	1.20	1.20	1.80
40-31	N & S DOPP Silica Baghouse	620	0.03	0.03	99.998%	Y	0.70	0.70	0.70
40-32	Fryma 2 Silica Baghouse	620	0.03	0.03	99.998%	Y	0.70	0.70	0.70
40-33	Fryma 2 Dical Baghouse	1600	0.02	0.03	99.998%	Y	1.20	1.20	1.80
40-34	Fryma 1 Silica Baghouse	620	0.03	0.03	99.998%	Y	0.70	0.70	0.70
40-35	Fryma 1 Dical Baghouse	1720	0.02	0.03	99.998%	Y	1.29	1.29	1.94
40-36	Dical Silo S-1 Railcar Unloading Baghouse	3437	0.02	0.03	99.998%	Y	2.58	2.58	3.87
40-37	Dical Silo S-1 Truck Unloading Vent Baghouse	6	0.02	0.03	99.998%	Y	0.00	0.00	0.01
40-38	Fryma Silo S-2 Railcar Unloading Baghouse	3437	0.02	0.03	99.998%	Y	2.58	2.58	3.87
40-39	Fryma Silo S-2 Truck Unloading Vent Baghouse	4	0.02	0.03	99.998%	Y	0.00	0.00	0.00
40-40	Silica Silo S-3 Truck Unloading Vent Baghouse	4	0.02	0.03	99.998%	Y	0.00	0.00	0.00
40-41	Silica Silo S-3 Railcar Unloading Baghouse	666	0.03	0.03	99.998%	Y	0.75	0.75	0.75
40-42	B Dopp Silica Cyclone Bin Baghouse	456	0.02	0.03	99.990%	Y	0.34	0.34	0.51
40-43	B Dopp Silica Bag Dump Station Baghouse	643	0.03	0.03	99.990%	Y	0.72	0.72	0.72
40-44	Fryma Multi-Bag Dump Station Vent Baghouse	643	0.03	0.03	99.990%	Y	0.72	0.72	0.72
40-47	B Dopp Silica Cyclone Baghouse	602	0.02	0.03	99.990%	Y	0.45	0.45	0.68
40-48	Fryma 1 Silica Cyclone Baghouse	666	0.02	0.03	99.990%	Y	0.50	0.50	0.75
40-49	Fryma 2 Silica Cyclone Baghouse	666	0.02	0.03	99.990%	Y	0.50	0.50	0.75
Subtotal							910.88	19.43	27.00
Lime Storage									
48-01	Lime Silo Vent Baghouse	1296	0.02	0.03	99.900%	Y	0.97	0.97	1.46
TOTAL							911.85	20.41	28.46

* For units with integral baghouses, the uncontrolled potential is equivalent to the controlled potential since the source cannot operate without the baghouses

Sample Calculation

Assume ACFM = SCFM = 1,600 (dscf / min)
 Allowable Loading = 0.03 (gr / dscf)

$$1600 \frac{\text{dscf}}{\text{min}} * 0.02 \frac{\text{gr}}{\text{dscf}} * 525,600 \frac{\text{min}}{\text{year}} * \frac{\text{lb}}{7000 \text{ gr}} * \frac{\text{ton}}{2000 \text{ lbs}} = 1.80 \frac{\text{tons}}{\text{year}}$$

Hazardous Air Pollutants (HAPs)

**** Boilers ****

The following calculations determine the amount of HAP emissions created by the combustion of **natural gas** before & after controls from the boilers, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.4

Hazardous Air Pollutants (HAPs):

		242.0 MMBtu/hr * 8,760 hr/yr		
		1,000 Btu/cf * 2,000 lb/ton	* Ef (lb/MMcf) = (ton/yr)	
			Potential To Emit*	Limited Emissions**
Benzene:	2.1E-03 lb/MMcf =		2.23E-03 ton/yr	2.08E-03 ton/yr
Dichlorobenzene:	1.2E-03 lb/MMcf =		1.27E-03 ton/yr	1.19E-03 ton/yr
Formaldehyde:	7.5E-02 lb/MMcf =		7.95E-02 ton/yr	7.43E-02 ton/yr
Hexane:	1.8E+00 lb/MMcf =		1.91E+00 ton/yr	1.78E+00 ton/yr
Toluene:	3.4E-03 lb/MMcf =		3.60E-03 ton/yr	3.37E-03 ton/yr
Lead:	5.0E-04 lb/MMcf =		5.30E-04 ton/yr	4.95E-04 ton/yr
Cadmium:	1.1E-03 lb/MMcf =		1.17E-03 ton/yr	1.09E-03 ton/yr
Chromium:	1.4E-03 lb/MMcf =		1.48E-03 ton/yr	1.39E-03 ton/yr
Manganese:	3.8E-04 lb/MMcf =		4.03E-04 ton/yr	3.76E-04 ton/yr
Nickel:	2.1E-03 lb/MMcf =		2.23E-03 ton/yr	2.08E-03 ton/yr
Total HAPs =			2.00E+00 ton/yr	1.87E+00 ton/yr

* Potential to emit calculations - similar to criteria pollutants

**Limited emission calculation - similar to criteria pollutants

The following calculations determine the amount of HAP emissions created by the combustion of **No 2 Fuel oil** before & after controls from the boilers, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.4

Hazardous Air Pollutants (HAPs):

		242.0 MMBtu/hr * 8,760 hr/yr		
		2,000 lb/ton	* Ef (lb/MMBtu) = (ton/yr)	
			Potential To Emit*	Limited Emissions**
Arsenic:	4.0E-06 lb/MMBtu =		4.24E-03 ton/yr	4.32E-04 ton/yr
Beryllium:	3.0E-06 lb/MMBtu =		3.18E-03 ton/yr	3.24E-04 ton/yr
Cadmium:	3.0E-06 lb/MMBtu =		3.18E-03 ton/yr	3.24E-04 ton/yr
Chromium:	3.0E-06 lb/MMBtu =		3.18E-03 ton/yr	3.24E-04 ton/yr
Lead:	9.0E-06 lb/MMBtu =		9.54E-03 ton/yr	9.71E-04 ton/yr
Mercury:	3.0E-06 lb/MMBtu =		3.18E-03 ton/yr	3.24E-04 ton/yr
Manganese:	6.0E-06 lb/MMBtu =		6.36E-03 ton/yr	6.47E-04 ton/yr
Nickel:	3.0E-06 lb/MMBtu =		3.18E-03 ton/yr	3.24E-04 ton/yr
Selenium:	1.5E-05 lb/MMBtu =		1.59E-02 ton/yr	1.62E-03 ton/yr
Total HAPs =			5.19E-02 ton/yr	5.29E-03 ton/yr

* Potential to emit calculations = Throughput (MMBtu/hr) * Emission Factor (lb/MMBtu) * 8760 hrs/yr / 2,000 lb/ton

**Limited emission calculation = Throughput (MMBtu/yr) * Emission Factor (lb/MMBtu) / 2,000 lb/ton

**** summary of source HAP emissions potential to emit ****

Arsenic:	0.004	ton/yr
Benzene:	0.002	ton/yr
Beryllium:	0.003	ton/yr
Cadmium:	0.003	ton/yr
Chromium:	0.003	ton/yr
Dichlorobenzene:	0.001	ton/yr
Formaldehyde:	0.080	ton/yr
Hexane:	1.908	ton/yr
Lead:	0.010	ton/yr
Manganese:	0.006	ton/yr
Mercury:	0.003	ton/yr
Methanol:	5.695	ton/yr
Nickel:	0.003	ton/yr
Selenium:	0.016	ton/yr
Toluene:	0.004	ton/yr
HAP from waste water treatment plant:	1.140	ton/yr
Total:	7.742	ton/yr

**** summary of source HAP limited emissions ****

Arsenic:	0.000	ton/yr
Benzene:	0.002	ton/yr
Beryllium:	0.000	ton/yr
Cadmium:	0.001	ton/yr
Chromium:	0.001	ton/yr
Dichlorobenzene:	0.001	ton/yr
Formaldehyde:	0.074	ton/yr
Hexane:	1.782	ton/yr
Lead:	0.001	ton/yr
Manganese:	0.001	ton/yr
Mercury:	0.000	ton/yr
Methanol:	5.695	ton/yr
Nickel:	0.002	ton/yr
Selenium:	0.002	ton/yr
Toluene:	0.003	ton/yr
HAP from waste water treatment plant:	1.140	ton/yr
Total:	7.567	ton/yr

**** Source-wide Emissions Before Controls ****

P M:	926.99	ton/yr
P M-10:	936.84	ton/yr
S O 2:	387.08	ton/yr
N O x:	151.44	ton/yr
V O C:	12.79	ton/yr
C O:	89.05	ton/yr

**** Source-wide Emissions After Controls ****

P M:	30.34	ton/yr
P M-10:	35.99	ton/yr
S O 2:	39.40	ton/yr
N O x:	99.00	ton/yr
V O C:	12.40	ton/yr
C O:	83.16	ton/yr

**** miscellaneous ****

326 IAC 7 Compliance Calculations:

The following calculations determine the maximum sulfur content of # 2 fuel oil allowable by 326 IAC 7:

$$0.5 \text{ lb/MMBtu} \times 140,000 \text{ Btu/gal} = 70 \text{ lb/1000gal}$$

$$70 \text{ lb/1000gal} / 142 \text{ lb/1000 gal} = 0.5 \%$$

Sulfur content must be less than or equal to 0.5% to comply with 326 IAC 7.