



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: July 19, 2011

RE: Eli Lily & Company – Clinton Laboratories / 165-30354-00009

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

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) 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.

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

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

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

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



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Mr. Don Blair
Eli Lilly and Company - Clinton Laboratories
10500 South State Road 63
Clinton, IN 47842

July 19, 2011

Re: 165-30354-00009
Significant Permit Modification to
Part 70 Permit Renewal No.: T 165-27283-
00009

Dear Mr. Blair:

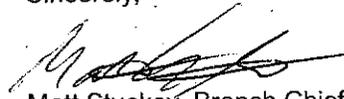
Eli Lilly and Company - Clinton Laboratories was issued a Part 70 Operating Permit Renewal on October 16, 2009 for a pharmaceutical manufacturing plant. A letter requesting changes to this permit was received on March 16, 2011. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The source has applied for a Title V Significant Permit Modification, pursuant to 326 IAC 2-7-12, in order to revise the permit to include provisions for Plant-Wide Applicability Limits [PAL] for nitrogen oxides [NOx] and sulfur dioxide [SO₂].

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Josiah Balogun, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Josiah Balogun or extension (4-5257), or dial (317) 234-5257.

Sincerely,



Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Attachments:
Updated Permit
Technical Support Document
PTE Calculations

JB

cc: File – Vermillion County
Vermillion County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch



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Flexible Permit and Part 70 Operating Permit Renewal And Plantwide Applicability Limitations (PAL) Permit

OFFICE OF AIR QUALITY

Eli Lilly and Company - Clinton Laboratories
10500 South State Road 63
Clinton, Indiana 47842

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit. The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions. This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

| | |
|--|--|
| Operation Permit No.: T165-27283-00009 | |
| Issued by: Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality | Issuance Date: October 16, 2009 Expiration Date: October 16, 2014 |

| | |
|---|--|
| Significant Permit Modification No.: 165-30354-00009 | |
| Issued by:  Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality | Issuance Date: July 19, 2011 Expiration Date: October 16, 2014 |

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

- C.8 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]

- C.9 Compliance Requirements [326 IAC 2-1.1-11]

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

- C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]
- C.11 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]
- C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

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

- C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]
- C.15 Response to Abnormal or Out-of-Range Compliance Monitoring Measurements [326 IAC 2-7-5] [326 IAC 2-7-6]
- C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

Stratospheric Ozone Protection

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

D.1. EMISSIONS UNIT OPERATION CONDITIONS

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

- D.1.1 Particulate Matter [326 IAC 6-2][326 IAC 6-3]
- D.1.2 Sulfur Dioxide (SO₂) [326 IAC 7-4-8]
- D.1.3 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]
- D.1.4 Prevention Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

- D.1.4.1 Particulate Matter Control
- D.1.5 Testing Requirements [326 IAC 2-7-6(1) and (6)]
- D.1.6 Coal Sampling and Analysis for SO₂ [326 IAC 3-7][326 IAC 7-2]

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

- D.1.7 [Reserved]
- D.1.8 Continuous Opacity Monitoring [326 IAC 3-5]
- D.1.9 Opacity Readings [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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

- D.1.10 Coal Characteristics and Consumption Records
- D.1.11 [Reserved]
- D.1.12 Continuous Opacity Monitoring

D.1.13 [Reserved]

D.1.14 Standard Operating Procedures

D.1.15 Reporting Requirement

Modification and Construction Requirements [326 IAC 2-7-10.5, 326 IAC 2-12 and 326 IAC 2-2]

D.1.16 Modification and Construction: Advance Approval of Permit Conditions

D.2. EMISSIONS UNIT OPERATION CONDITIONS

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

D.2.1 Particulate Matter [326 IAC 6-3-2]

D.2.2 NESHAP for Pharmaceuticals Production Non-Applicability Determination [40 CFR Part 63, Subpart GGG]

D.2.3 Prevention Maintenance Plan [326 IAC 2-7-5(13)]

Testing and Monitoring Requirements

D.2.4 Testing Requirements [326 IAC 2-7-6(1) and (6)]

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

D.2.5 Record Keeping Requirement

Modification and Construction Requirements [326 IAC 2-7-10.5, 326 IAC 2-12 and 326 IAC 2-2]

D.2.6 Modification and Construction: Advanced Approval of Permit Conditions

D.2.7 Leak Detection and Repair

D.3. EMISSIONS UNIT OPERATION CONDITIONS

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

D.3.1 Particulate Matter [326 IAC 6-2][326 IAC 6-3]

D.3.2 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6][326 IAC 2-2-3]

D.3.3 [Reserved]

D.3.4 Prevention Maintenance Plan [326 IAC 2-7-5(13)]

Leak Detection and Repair Requirements [326 IAC 2-7-5(1)]

D.3.5 [Reserved]

Testing and Monitoring Requirements

D.3.6 Testing Requirements [326 IAC 2-7-6(1) and (6)]

D.3.7 Continuous Emissions Monitoring [2-1.1-11][326 IAC 3-5]

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

D.3.8 Record Keeping Requirement

D.3.9 [Reserved]

Modification and Construction Requirements [326 IAC 2-7-10.5, 326 IAC 2-12 and 326 IAC 2-2]

D.3.10 Modification and Construction: Advanced Approval of Permit Conditions

D.3.11 Leak Detection and Repair

D.3.12 Control Strategy for Volatile Organic Compounds (VOCs) [326 IAC 2-2-3]

D.4. EMISSIONS UNIT OPERATION CONDITIONS

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

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

D.4.2 Best Available Control Technology (BACT) [326 IAC 8-1-6][326 IAC 2-2-3]

- D.4.2.1 PM and PM10 Control Requirements
- D.4.3 Prevention Maintenance Plan [326 IAC 2-7-5(13)]
- D.4.4 [Reserved]

Testing and Monitoring Requirements

- D.4.5 Testing Requirements [326 IAC 2-7-6(1) and (6)]
- D.4.6 Continuous Emissions Monitoring [2-1.1-11][326 IAC 3-5]
- D.4.7 Visible Emissions Observations [326 IAC 2-1.1-11]

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

- D.4.8 Record Keeping Requirements
- D.4.9 Reporting Requirements
- D.4.10 [Reserved]

Modification and Construction Requirements [326 IAC 2-7-10.5, 326 IAC 2-12 and 326 IAC 2-2]

- D.4.11 Modification and Construction: Advanced Approval of Permit Conditions
- D.4.12 Leak Detection and Repair
- D.4.13 Control Strategy for Volatile Organic Compounds (VOCs) [326 IAC 2-2-3]

D.5. RESERVED

D.6. RESERVED

D.7. RESERVED

D.8. RESERVED

D.9. RESERVED

D.10. RESERVED

D.11. RESERVED

D.12. RESERVED

D.13. RESERVED

D.14. RESERVED

D.15. RESERVED

D.16. EMISSIONS UNIT OPERATION CONDITIONS

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

- D.16.1 Cold-Cleaner Degreasers Constructed Between January 1, 1980 and July 1, 1990
[326 IAC 8-3-2]
- D.16.2 Cold-Cleaner Degreasers Constructed after July 1, 1990 [326 IAC 8-3-5]

Modification and Construction Requirements [326 IAC 2-7-10.5, 326 IAC 2-12 and 326 IAC 2-2]

- D.16.3 Modification and Construction: Advanced Approval of Permit Conditions

E.1. RESERVED

E.2. RESERVED

E.3. EMISSIONS UNIT OPERATION CONDITIONS

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

- E.3.1 Leak Detection and Repair (LDAR) for Narasin Process Equipment Emission Units 1-11

F.1. RESERVED

F.2. EMISSIONS UNIT OPERATION CONDITIONS

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

- F.2.1 Emission Limits [326 IAC 2-2]

- F.2.2 Site Modification and Advance Approval of Modifications [326 IAC 2--7-5(9)]
[326 IAC 2-7-5(16)]
- F.2.3 Volatile Organic Compounds (VOC) Emission Limit Determination

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

- F.2.4 Records and Reporting of Emissions
- F.2.5 Records and Reporting of Site Modifications [326 IAC 2-7-5(16)][326 IAC 2-7-20(a)]
[40 CFR 63.1259][40 CFR 63.1260]
- F.2.6 Notification for Site Modifications [326 IAC 2-1.1-12(c) to (f)]

Other Flexibel Permit Requirements

- F.2.7 Valid Period for Best Available Control Technology [326 IAC 2-2-3(4)]
- F.2.8 NSPS and NESHAP Pre-Construction Notification and Reviews

G.1. EMISSIONS UNIT OPERATION CONDITIONS

Source Wide Emission Limits [326 IAC 2-2.4-7(1)]

- G.1.1 Emission Limits [326 IAC 2-2.4-7(1)]

General PAL Requirements [326 IAC 2-2.4-1(c)]

- G.1.2 Major New Source Review Applicability [326 IAC 2-2.4-1(c)]
- G.1.3 General PAL Requirements [326 IAC 2-2.4-7] [326 IAC 2-2.4-8] [326 IAC 2-2.4-9] [326 IAC 2-2.4-10] [326 IAC 2-2.4-11] [326 IAC 2-2.4-15]

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

- G.1.4 Nitrogen Oxides (NOx) Emission Limit Determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]
- G.1.5 Sulfur Dioxides (SO2) Emission Limit Determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]
- G.1.6 Validation and Revaluation of Emission Determination Methods [326 IAC 2-2.4-12(i)]

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

- G.1.7 Record Keeping Requirement [326 IAC 2-7-5(3)] [326 IAC 2-2.4-13]
- G.1.8 Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-2.4-14]

Certification

Emergency Occurrence Report

Quarterly Report

Quarterly Deviation and Compliance Monitoring Report

- (h) [Reserved]
- (i) [Reserved]
- (j) [Reserved]
- (k) [Reserved]
- (l) [Reserved]
- (m) [Reserved]
- (n) [Reserved]
- (o) [Reserved]

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

- (a) This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):
 - (1) D.2 Animal Health Manufacturing (AHM) – Fermentation Operations: Various mixers, bump tanks and fermenter tanks in the fermentation operations each emitting less than 5 pounds PM10 per hour or 25 pounds per day. [326 IAC 6-3-2].
 - (2) D.16 Insignificant Activities: This section provides specific requirements for cold-cleaning organic solvent degreasing operations at the site which are defined as insignificant activities pursuant to 326 IAC 2-7-1(21)(G)(vi)(CC).
- (b) This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21), that do not have applicable requirements:
 - (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
 - (2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour;
 - (3) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour;
 - (4) Combustion source flame safety purging on startup;
 - (5) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;
 - (6) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
 - (7) VOC/HAP storage tanks with capacity less than or equal to 1,000 gallons and

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, T165-27293-00009, 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 or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.2.1 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; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.3 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

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

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

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

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

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

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

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

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

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Compliance and Enforcement Branch)
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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
 - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency

provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

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

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

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

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

- (b) In addition to the nonapplicability determinations set forth in Section D of this permit, the IDEM, OAQ has made the following determination regarding this source.

- (1) **40 CFR Part 60, Subpart D – Fossil-fuel fired steam generating units:** This source is not subject to 40 CFR Part 60, Subpart D because none of the boilers at the plant site exceed 250 MMBtu/hr in heat input capacity. [40 CFR 60.40(a)(1)].
- (2) **40 CFR Part 60, Subpart Db – Industrial-Commercial-Institutional steam generating units:** This source is not subject to 40 CFR Part 60, Subpart Db because commencement of constructed, modification, or reconstructed of the boilers at plant site with a maximum design heat input capacity of greater than 100 million MMBtu/hr, all occurred before June 1, 1984.
- (3) **40 CFR Part 60, Subpart Dc – Small Industrial-Commercial-Institutional steam generating units:** This source is not subject to 40 CFR Part 60, Subpart Dc because commencement of constructed, modification, or reconstructed of the boilers at plant site with a maximum design heat input capacity of greater than 100 million MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr, all occurred before June 9, 1989.
- (4) **40 CFR Part 63, Subpart Q – Industrial Process Cooling Towers:** This source is not subject to 40 CFR Part 63, Subpart Q and 326 IAC 20-4 because the source does not utilize chromium based water treatment compounds in its cooling towers. [40 CFR 63.400].
- (5) **40 CFR Part 63, Subpart T – Halogenated Solvent Cleaning:** This source is not subject to 40 CFR Part 63, Subpart T and 326 IAC 20-6 because the source does not use halogenated solvents in any solvent cleaning machines. [40 CFR 63.460].
- (6) **40 CFR Part 63, Subpart MMM – Pesticide Active Ingredient Production:**

This source is not subject to 40 CFR Part 63, Subpart MMM and 326 IAC 20-45 because the source does not contain any pesticide active ingredient process units or associated equipment as described in 40 CFR 63.1360. [40 CFR 63.1360].

- (7) **40 CFR Part 63, Subpart GGGGG – Site Remediation:** This source is not subject to 40 CFR Part 63, Subpart GGGGG because the site is not performing any remediation activities as defined in this rule.
 - (8) **326 IAC 6-5 – Fugitive Particulate Matter Emission Limitations:** This source does not have potential fugitive dust emissions greater than 25 tons per year, and is therefore, not subject to the requirements of this rule.
 - (9) **326 IAC 8-4 – Petroleum Sources:** This source does not operate any facilities subject to the requirements of 326 IAC 8-4. 326 IAC 8-4-6 is not applicable to this source because the source does not accept deliveries of gasoline by transports, as defined by 326 IAC 1-2-84.
 - (10) **40 CFR Part 60, Subpart K - Storage Vessels for Petroleum Liquids:** This source is not subject to 40 CFR 60, Subpart K because none of the storage tanks at the source constructed between June 11, 1973 and May 19, 1978 store petroleum liquids, as defined in 40 CFR 60.111.
 - (11) **40 CFR Part 60, Subpart Ka - Storage Vessels for Petroleum Liquids:** This source is not subject to 40 CFR 60, Subpart K because none of the storage tanks at the source constructed between June 11, 1973 and May 19, 1978 store petroleum liquids, as defined in 40 CFR 60.111.
 - (12) 40 CFR 63, Sections 63.50 through 63.56 - Section 112(j): This is not subject to 40 CFR Part 63, Section 63.50 through 63.56 because there are no affected sources within a source category or subcategory for which USEPA has failed to promulgate emission standards by the section 112 (j) deadlines.
 - (13) **326 IAC 8-6 – Organic Solvent Emissions Limitations:** The provisions of 326 IAC 8-6 are not applicable to this source because the source uses exempt solvent pursuant to 326 IAC 8-6-2(a)(4).
 - (14) **326 IAC 10 – Nitrogen Oxide Rules:** This source does not contain any emission units identified in 326 IAC 10-4. Therefore, the source is not subject to the NO_x emission control requirements of that rule.
 - (15) **326 IAC 15 – Lead Rules:** This source does not contain any emission units described in 326 IAC 15. Therefore, the source is not subject to the requirements of those rules.
 - (16) **326 IAC 21 – Acid Deposition:** This source does not contain any emission units described in 326 IAC 21. Therefore, the source is not subject to the requirements of those rules.
- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

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

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

- (a) All terms and conditions of permits established prior to T165-27293-00009 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control)

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue

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

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

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

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

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

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

Request for renewal shall be submitted to:

approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

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

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

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

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

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

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

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

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and

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

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

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

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

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

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

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(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 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.3 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.4 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.5 Fugitive Dust Emissions [326 IAC 6-4]

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

C.6 Stack Height [326 IAC 1-7]

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140. The requirement in 326 IAC 14-10-1(a) that the owner or operator shall use an Indiana Accredited Asbestos Inspector and all the requirements in 326 IAC 18 related to licensing requirements for asbestos inspectors are not federally enforceable.

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

C.8 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)] [326 IAC 3-5]

- (a) This section applies to the operation and maintenance of equipment and devices specified in Section D of this permit to determine or monitor compliance, except that it does not apply to continuous emissions monitoring systems or continuous opacity monitoring systems described in Section D. Conditions C.11 (Maintenance of Continuous Emission Monitoring Equipment) and C.12 (Maintenance of Continuous Opacity Monitoring Equipment) establish the general operation and maintenance requirements for continuous emission monitoring systems and continuous opacity monitoring systems, respectively.
- (b) 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

- (c) Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.
- (d) The Permittee shall keep records of monitoring system operation that include the following:
 - (1) All maintenance logs, calibration checks, and other required quality assurance activities.
 - (2) All records of corrective and preventive action.
 - (3) A log of monitoring system downtime, including the following:
 - (A) Date of monitoring system downtime.
 - (B) Time of commencement and completion of each downtime.
 - (C) Reason for each downtime.
- (e) The Permittee shall submit a report of monitoring system downtime as specified in Section D. The report shall include the following:
 - (1) Date of monitoring system downtime.
 - (2) Time of commencement.
 - (3) Duration of each downtime.
 - (4) Reasons for each downtime.
 - (5) Nature of system repairs and adjustments.
- (f) Except where permit conditions streamline similar applicable requirements pursuant to 326 IAC 2-7-24, nothing in this permit nor in 326 IAC 3-5 supersedes the monitoring provisions in 40 CFR Part 60 or 40 CFR Part 63.

C.11 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 2-1.1-11] [326 IAC 3-5]

- (a) 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

- (b) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment in accordance with applicable federal regulations and 326 IAC 3-5.
- (c) This provision applies only to CEMS operated solely for monitoring compliance with BACT limitations. The CEMS shall be operated at all times as specified in Section D, except during CEMS malfunctions, reasonable periods of necessary CEMS calibration or CEMS maintenance activities. CEMS calibration and maintenance activities shall be properly documented and shall be conducted pursuant to the standard operating procedures under 326 IAC 3-5-4(a).
- (d) The Permittee shall keep records in accordance with 326 IAC 3-5-6(b) that includes the following:
 - (1) All documentation relating to:
 - (A) design, installation, and testing of all elements of the monitoring system; and
 - (B) required corrective action or compliance plan activities.
 - (2) All maintenance logs, calibration checks, and other required quality assurance activities.
 - (3) All records of corrective and preventive action.
 - (4) A log of plant operations, including the following:
 - (A) Date of facility downtime.
 - (B) Time of commencement and completion of each downtime.
 - (C) Reason for each downtime.
- (e) In accordance with 326 IAC 3-5-7(5), the Permittee shall submit reports of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately. The reports shall include the following:

- (2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, until such time that COMS is online.
- (3) Method 9 readings may be discontinued once a COMS is online.
- (4) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Deviation and COMS Excess Emissions Reports.
- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, (and 40 CFR 60 and/or 40 CFR 63).

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

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.15 Response to Abnormal or Out-of-Range Compliance Monitoring Measurements [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting a measurement required by a compliance monitoring condition of this permit that is outside the normal or usual range of values for the monitoring parameter, 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:

any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

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

- (a) Records of all required monitoring data, reports and support information required by this permit or Title V Operational Permit T165-6462-00009, third significant permit modification No. 165-26307-00009 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 or ninety (90) days of initial start-up, whichever is later.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain the following records:
- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
- (i) Baseline actual emissions;
- (ii) Projected actual emissions;
- (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
- (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions

increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
- (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and

- (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
 - (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

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

The Permittee shall comply with all the applicable provisions of 40 CFR Part 82, wherever applicable to activities at the source.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Utilities Operations

(a) The following emissions units are subject to applicable requirements described in this D section.

| Bldg. | Unit ID* | Unit Description | Stack/Vent ID | Control Devices** | Capacity | Units |
|-------|----------|------------------------------------|--------------------|-------------------|----------|------------|
| C31 | Ash Tank | Ash Tank for C31 Coal Fired Boiler | PVC31ASH TK TRNSFR | Baghouse** | 6,361 | Cubic Feet |
| C31 | BLR01 | Coal Fired Boiler | C31IDF130 | Baghouse** | 243 | MMBTU/hr |
| C21 | BLR01 | Natural Gas Fired Boiler | PVC21BLR1 | | 79.5 | MMBTU/hr |
| C21 | BLR02 | Natural Gas Fired Boiler | PVC21BLR2 | | 79.5 | MMBTU/hr |
| C21 | BLR03 | Natural Gas Fired Boiler | PVC21BLR3 | | 79.5 | MMBTU/hr |
| C21 | BLR04 | Natural Gas Fired Boiler | PVC21BLR4 | | 140.6 | MMBTU/hr |

* Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).

** Control devices marked with a double asterisk are required to meet an applicable limitation.

(b) The following emissions units are not subject to applicable requirements described in this D section, and are listed only for informational purposes.

| Bldg. | Unit ID* | Unit Description | Stack/Vent ID | Control Devices** | Capacity | Units |
|-------|----------|--------------------------------|---------------|-------------------|----------|------------|
| C31 | TK600* | Powdered Activated Carbon Silo | FLT630 | | 2,294 | Cubic Feet |
| C24 | DFP01* | Diesel Fire Pump | PVC24DFP1 | | 2.15 | MMBTU/hr |
| C24 | DFP02* | Diesel Fire Pump | PVC24DFP2 | | 2.15 | MMBTU/hr |
| C44 | GEN01* | Emergency Diesel Generator | PVC44GEN1 | | 3.99 | MMBTU/hr |
| C55 | GEN01* | Emergency Diesel Generator | PVC55GEN1 | | 1.3 | MMBTU/hr |
| C79 | GEN01* | Back-Up Fire Pump Generator | PVC79GEN1 | | 4.86 | MMBTU/hr |
| C23 | TK01* | #2 Fuel Oil Storage Tank | PVC23TK1 | | 238,000 | Gallons |
| C24 | TK01* | #2 Fuel Oil Storage Tank | PVC24TK1 | | 275 | Gallons |
| C79 | TK01* | #2 Fuel Oil Storage Tank | PVC79TK1 | | 500 | Gallons |
| C24 | TK02* | #2 Fuel Oil Storage Tank | PVC24TK2 | | 275 | Gallons |

* Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).

** Control devices marked with a double asterisk are required to meet an applicable limitation.

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

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

D.1.1 Particulate Matter [326 IAC 6-2] [326 IAC 6-3]

(a) Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the particulate matter emissions from the coal-fired boiler (C31 BLR01) shall not exceed 0.34 pound per million Btu heat input.

- (b) Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the particulate matter emissions from each of the natural gas/fuel oil-fired boilers (C21 BLR01, BLR02, BLR03 and BLR04) shall not exceed 0.19 pound per million Btu heat input.
- (c) Pursuant to 326 IAC 6-3-2 (Particulate Matter Emission Limitations for Manufacturing Processes), particulate matter emissions from the C31 ash tank shall not exceed 2.86 pounds per hour based on a maximum throughput of 0.585 tons per hour.

D.1.2 Sulfur Dioxide (SO₂) [326 IAC 7-4-8]

- (a) Pursuant to 326 IAC 7-4-8 (SO₂ Emission Limitations), the SO₂ emissions from the coal-fired boiler (C31 BLR01) shall not exceed 4.72 pounds per million Btu heat input.
- (b) Pursuant to 326 IAC 7-4-8 (SO₂ Emission Limitations), the SO₂ emissions from each of the natural gas/fuel oil-fired boilers (C21 BLR01, BLR02, BLR03 and BLR04) shall not exceed 0.36 pound per million Btu heat input.

D.1.3 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]

Pursuant to 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), the following conditions apply as an alternative to the opacity limitations in Section C, Condition C.2 - Opacity:

- (a) When building a new fire in a boiler, or shutting down a boiler, opacity may exceed the applicable limit established in 326 IAC 5-1-2 and stated in Section C, Condition C.2 - Opacity. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period. Opacity in excess of the applicable limit established in 326 IAC 5-1-2 shall not continue for more than two (2) six (6)-minute averaging periods in any twenty-four (24) hour period.
- (b) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2 and stated in Section C, Condition C.2 - Opacity. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6)-minute averaging periods in any sixty (60) minute period. The averaging periods shall not be permitted for more than three (3) six (6)-minute averaging periods in a twelve (12) hour period.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the coal-fired boiler and associated control devices. The requirements for a Preventive Maintenance Plan are described in Section B, Condition B.10 – Preventive Maintenance Plan.

Compliance Determination Requirements

D.1.4.1 Particulate Matter Control

In order to comply with Condition D.1.1(a), the baghouse for particulate matter control shall be in operation and control emissions from the coal-fired boiler C31 at all times that this boiler is in operation and combusting coal as the fuel.

D.1.5 Testing Requirements [326 IAC 2-7-6(1) and (6)]

- (a) In order to determine compliance with Condition D.1.1, the Permittee shall perform particulate matter performance tests for the coal-fired boiler (C31 BLR01) by August 2010 utilizing Methods 5 or 17 (40 CFR Part 60, Appendix A) for PM or other methods as approved by the Commissioner. These tests shall be repeated every third calendar year from the calendar year of the most recently completed stack test. The requirements for

conducting performance tests are described in Section C, Condition C.8 – Performance Testing.

- (b) No emissions testing is required for the boilers to assess compliance with the sulfur dioxide emissions limits established in Condition D.1.2(b) at this time, but IDEM may require performance testing when necessary. The requirements for conducting performance tests are described in Section C, Condition C.8 – Performance Testing.

D.1.6 Coal Sampling and Analysis for SO₂ [326 IAC 3-7] [326 IAC 7-2]

The Permittee shall collect coal sampling and analysis data on a calendar month basis in accordance with one of the following methods specified in 326 IAC 3-7 for the coal-fired boiler (C31 BLR01):

- (a) Coal sampling and analysis performed using one of the following procedures:
- (1) Sampling and analyzing the coal according to the Permittee's Coal Sampling and Assay Plan, submitted pursuant to 326 IAC 3-7-5(a). The following minimum sampling and analysis requirements shall be met:
 - (A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;
 - (B) Coal shall be sampled at least two (2) times per day and at least one (1) time per twelve (12) hour period unless no coal is bunkered during the preceding twelve (12) hour period. This permit condition satisfies the requirements of 326 IAC 3-7-2(b)(3)(B).
 - (C) Minimum sample size shall be five hundred (500) grams;
 - (D) Samples shall be composited and analyzed at the end of each calendar month;
 - (E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or
 - (2) Sampling and analyzing the coal pursuant to 326 IAC 3-7-2(a).
- (b) Upon written notification to IDEM by the Permittee, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5-1 may be used as the means for determining compliance with the emission limitations in 326 IAC 7-1.1-2. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(g)]

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

D.1.7 [Reserved]

D.1.8 Continuous Opacity Monitoring [326 IAC 3-5]

Pursuant to 326 IAC 3-5-1 (Continuous Monitoring of Emissions), a continuous monitoring system shall be calibrated, maintained, and operated for measuring opacity from the coal-fired boiler (C31 BLR01).

- (a) The Permittee shall comply with the applicable performance and operating specifications of 326 IAC 3-5-2.
- (b) The Permittee shall comply with the applicable monitor system certification requirements of 326 IAC 3-5-3.
- (c) The Permittee shall comply with the applicable quality assurance and quality control (QA/QC) requirements of 326 IAC 3-5-5.

D.1.9 Opacity Readings [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

When the coal-fired boiler (C31 BLR01) is in operation and combusting coal as a fuel:

- (a) Appropriate response steps shall be taken in accordance with Section C - Response to abnormal or out-of-range Compliance Monitoring Measurements whenever the opacity from stack C31IDF130 exceeds fifteen percent (15%) for three (3) consecutive six (6) minute averaging periods. This requirement shall not apply when the Continuous Opacity Monitoring System records opacity levels greater than 15% due to COMS calibration, maintenance, or other quality assurance activities.
- (b) Opacity readings in excess of fifteen percent (15%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to abnormal or out-of-range Compliance Monitoring Measurements shall be considered a deviation from this permit.
- (c) The Permittee may request that the IDEM, OAQ approve a different opacity trigger level than the one specified in (a) and (b) of this condition, provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.

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

D.1.10 Coal Characteristics and Consumption Records

The Permittee shall record the information described in items (a) through (d) below on a calendar month basis for the coal-fired boiler (C31 BLR01).

- (a) The total amount (expressed in tons) of coal combusted;
- (b) The average sulfur content (expressed in percentage by weight) of the coal combusted;
- (c) The average heat content (expressed in Btu per pound) of the coal combusted; and
- (d) The average sulfur dioxide emission rate (expressed in pounds per million Btu) for the coal-fired boiler (C31 BLR01).

D.1.11 [Reserved]

D.1.12 Continuous Opacity Monitoring

The Permittee shall maintain records of the continuous opacity monitor readings of the coal-fired boiler (C31 BLR01).

D.1.13 [Reserved]

D.1.14 Standard Operating Procedures

- (a) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain a complete, written continuous monitoring standard operating procedure (SOP) for the continuous opacity monitor (COM). If revisions are made to the SOP, updates shall be submitted to the department biennially. The COM SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).
- (b) Pursuant to 326 IAC 3-7-5(a), the Permittee shall maintain a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. 326 IAC 3-7-4 is not applicable to this source because 326 IAC 3-7-5(a) references only coal-fired facilities. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.

D.1.15 Reporting Requirements

- (a) A quarterly summary of the information shall be submitted using the reporting form located at the end of this permit, or its equivalent. At a minimum, the report shall contain the information specified in Condition D.1.10.
- (b) The Permittee shall prepare and submit a written report of the results of the continuous opacity monitor calibration error audit for each calendar quarter. The report must contain the information required by 326 IAC 3-5-5(e)(2).
- (c) The Permittee shall prepare and submit a written report of excess opacity of the continuous opacity monitor each calendar quarter. The report must contain the information required by 326 IAC 3-5-7(4).
- (d) The Permittee shall prepare and submit a written report of continuous opacity monitor downtime each calendar quarter. The report must contain the information required by 326 IAC 3-5-7(5).

Modifications and Construction Requirements [326 IAC 2-7-10.5, 326 IAC 2-12 and 326 IAC 2-2]

D.1.16 Modifications and Construction: Advance Approval of Permit Conditions

The emission units described in this section D are not subject to the advance approval permit conditions.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: AHM - Fermentation Operations

(a) The following Unit IDs have applicable conditions in this D Section:

| Bldg. | Unit ID* | Narasin Emission Unit*** | Unit Description | Stack/Vent ID | Control** | Capacity | Units |
|-------|----------|--------------------------|------------------|---------------|----------------|----------|----------|
| C41 | TKF01 | 3 | Fermenter | PVC41F01 | Cyclone F1VLS | 50,000 | Gallo ns |
| C41 | TKF02 | 3 | Fermenter | PVC41F02 | Cyclone F2VLS | 50,000 | Gallo ns |
| C41 | TKF03 | 3 | Fermenter | PVC41F03 | Cyclone F3VLS | 50,000 | Gallo ns |
| C41 | TKF04 | 3 | Fermenter | PVC41F04 | Cyclone F4VLS | 50,000 | Gallo ns |
| C41 | TKF05 | 3 | Fermenter | PVC41F05 | Cyclone F5VLS | 50,000 | Gallo ns |
| C41 | TKF06 | 3 | Fermenter | PVC41F06 | Cyclone F6VLS | 50,000 | Gallo ns |
| C41 | TKF07 | 3 | Fermenter | PVC41F07 | Cyclone F7VLS | 50,000 | Gallo ns |
| C41 | TKF08 | 3 | Fermenter | PVC41F08 | Cyclone F8VLS | 50,000 | Gallo ns |
| C41 | TKF09 | 3 | Fermenter | PVC41F09 | Cyclone F9VLS | 50,000 | Gallo ns |
| C41 | TKF10 | 3 | Fermenter | PVC41F10 | Cyclone F10VLS | 50,000 | Gallo ns |
| C41 | TKF11 | 3 | Fermenter | PVC41F11 | Cyclone F11VLS | 50,000 | Gallo ns |
| C41 | TKF12 | 3 | Fermenter | PVC41F12 | Cyclone F12VLS | 50,000 | Gallo ns |
| C41 | TKF13 | 3 | Fermenter | PVC41F13 | Cyclone F13VLS | 50,000 | Gallo ns |
| C41 | TKF14 | 3 | Fermenter | PVC41F14 | Cyclone F14VLS | 50,000 | Gallo ns |
| C41 | TKF15 | 3 | Fermenter | PVC41F16 | Cyclone F15VLS | 50,000 | Gallo ns |
| C41 | TKF16 | 3 | Fermenter | PVC41F16 | Cyclone F16VLS | 50,000 | Gallo ns |
| C41A | TKF17 | No | Fermenter | PVC41AF17 | Cyclone F17VLS | 50,000 | Gallo ns |
| C41A | TKF18 | No | Fermenter | PVC41AF18 | Cyclone F18VLS | 50,000 | Gallo ns |
| C41A | TKF19 | No | Fermenter | PVC41AF19 | Cyclone F19VLS | 50,000 | Gallo ns |
| C41A | TKF20 | No | Fermenter | PVC41AF20 | Cyclone F20VLS | 50,000 | Gallo ns |
| C41A | TKF21 | No | Fermenter | PVC41AF21 | Cyclone F21VLS | 50,000 | Gallo ns |
| C41A | TKF22 | No | Fermenter | PVC41AF22 | Cyclone F22VLS | 50,000 | Gallo ns |
| C41A | TKF23 | No | Fermenter | PVC41AF23 | Cyclone F23VLS | 50,000 | Gallo ns |
| C41A | TKF24 | No | Fermenter | PVC41AF24 | Cyclone F24VLS | 50,000 | Gallo ns |
| C41A | TKF25 | No | Fermenter | PVC41AF25 | Cyclone F25VLS | 50,000 | Gallo ns |
| C41A | TKF26 | No | Fermenter | PVC41AF26 | Cyclone F26VLS | 50,000 | Gallo ns |
| C41A | TKF27 | No | Fermenter | PVC41AF27 | Cyclone F27VLS | 50,000 | Gallo ns |

| | | | | | | | |
|------|-------|----|----------------------|-------------|---------------------------------|--------|----------|
| C41A | TKF28 | No | Fermenter | PVC41AF28 | Cyclone F28VLS | 50,000 | Gallo ns |
| C41A | TKF29 | No | Fermenter | PVC41AF29 | Cyclone F29VLS | 50,000 | Gallo ns |
| C41A | TKF30 | No | Fermenter | PVC41AF30 | Cyclone F30VLS | 50,000 | Gallo ns |
| C41A | TKF31 | No | Fermenter | PVC41AF31 | Cyclone F31VLS | 50,000 | Gallo ns |
| C41A | TKF32 | No | Fermenter | PVC41AF32 | Cyclone F32VLS | 50,000 | Gallo ns |
| C44A | TK047 | 5 | Vibrating Bin | PVC44AC047 | Baghouse VS047** | 42,000 | Kg |
| C44A | TK048 | 5 | Vibrating Bin | PVC44AC048 | Baghouse VS048** | 43,680 | Kg |
| C44A | TK049 | 5 | Vibrating Bin | PVC44AC049 | Baghouse VS049** | 43,680 | Kg |
| C44A | TK050 | 5 | Vibrating Bin | PVC44AC050 | Baghouse VS050** | 42,000 | Kg |
| C44A | TK051 | 5 | Vibrating Bin | PVC44AC047 | Baghouse VS047** | 42,000 | Kg |
| C44A | TK052 | 5 | Vibrating Bin | PVC44AC052 | Baghouse VS052** | 37,408 | Kg |
| C44A | TK053 | 5 | Vibrating Bin | PVC44AC052 | Baghouse VS052** | 37,408 | Kg |
| C44A | TK054 | 5 | Vibrating Bin | PVC44AC050 | Baghouse VS050** | 42,000 | Kg |
| C44A | TK055 | 5 | Vibrating Bin | PVC44AC055 | Baghouse VS055** | 43,680 | Kg |
| C44A | TK056 | 5 | Vibrating Bin | PVC44AC055 | Baghouse VS055** | 43,680 | Kg |
| C44A | TK057 | 5 | Vibrating Bin | PVC44AC055 | Baghouse VS055** | 43,680 | Kg |
| C44A | TK058 | 5 | Vibrating Bin | PVC44AC055 | Baghouse VS055** | 43,680 | Kg |
| C43A | TK301 | 1 | Batch Fermenter Tank | PVC43AAC301 | Filter FLT301**, Baghouse VS311 | 7,500 | Gallo ns |
| C43A | TK302 | 1 | Batch Fermenter Tank | PVC43AAC301 | Filter FLT302**, Baghouse VS311 | 7,500 | Gallo ns |

*Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).

** Control devices marked with a double asterisk are required to meet an applicable limitation.

*** A number indicates the Narasin Emission Unit that the equipment is associated with. A "NO" indicates that the equipment is not associated with the Narasin Process.

(b) The following Unit IDs are not subject to applicable requirements, and are listed only for informational purposes

| Bldg. | Unit ID* | Narasin Emission Units*** | Unit Description | Stack/Vent ID | Control** | Capacity | Units |
|-------|----------|---------------------------|------------------|---------------|----------------|----------|---------|
| C41 | TKB01* | 2 | Bump Tank | PVC41B01 | Cyclone B1VLS | 7,000 | Gallons |
| C41 | TKB02* | 2 | Bump Tank | PVC41B02 | Cyclone B2VLS | 7,000 | Gallons |
| C41 | TKB03* | 2 | Bump Tank | PVC41B03 | Cyclone B3VLS | 7,000 | Gallons |
| C41 | TKB04* | 2 | Bump Tank | PVC41B04 | Cyclone B4VLS | 7,000 | Gallons |
| C41 | TKB05* | 2 | Bump Tank | PVC41B05 | Cyclone B5VLS | 7,000 | Gallons |
| C41 | TKB06* | 2 | Bump Tank | PVC41B06 | Cyclone B6VLS | 7,000 | Gallons |
| C41 | TKB07* | 2 | Bump Tank | PVC41B07 | Cyclone B7VLS | 7,000 | Gallons |
| C41 | TKB08* | 2 | Bump Tank | PVC41B08 | Cyclone B8VLS | 7,000 | Gallons |
| C41 | TKB09* | 2 | Bump Tank | PVC41B09 | Cyclone B9VLS | 7,000 | Gallons |
| C41 | TKB10* | 2 | Bump Tank | PVC41B10 | Cyclone B10VLS | 7,000 | Gallons |

| | | | | | | | |
|------|--------|----|-----------------------|-------------|----------------|-----------|---------|
| C41 | TKB11* | 2 | Bump Tank | PVC41B11 | Cyclone B11VLS | 7,000 | Gallons |
| C41 | TKB12* | 2 | Bump Tank | PVC41B12 | Cyclone B12VLS | 7,000 | Gallons |
| C41 | TKB13* | 2 | Bump Tank | PVC41B13 | Cyclone B13VLS | 7,000 | Gallons |
| C41 | TKB14* | 2 | Bump Tank | PVC41B14 | Cyclone B14VLS | 7,000 | Gallons |
| C41 | TKB15* | 2 | Bump Tank | PVC41B15 | Cyclone B15VLS | 7,000 | Gallons |
| C41 | TKB16* | 2 | Bump Tank | PVC41B16 | Cyclone B16VLS | 7,000 | Gallons |
| C41A | TKB22* | No | Bump Tank | PVC41AB22 | Cyclone B22VLS | 7,000 | Gallons |
| C41A | TKB24* | No | Bump Tank | PVC41AB24 | Cyclone B24VLS | 7,000 | Gallons |
| C41A | TKB26* | No | Bump Tank | PVC41AB26 | Cyclone B26VLS | 7,000 | Gallons |
| C41A | TKB28* | No | Bump Tank | PVC41AB28 | Cyclone B28VLS | 7,000 | Gallons |
| C43A | SM311* | 1 | Screw Mixer | PVC43AAC304 | Baghouse VS311 | N/A | N/A |
| C43A | TK305* | No | Mineral Pot | PVC43AAC305 | Filter FLT305 | 80 | Gallons |
| C41 | TKH01* | No | Hold Tank | PVC41TKH01 | | 20,000 | Gallons |
| C41 | TKH02* | 4 | Hold Tank | PVC41TKH02 | | 20,000 | Gallons |
| C41 | TKH03* | No | Hold Tank | PVC41TKH03 | | 50,000 | Gallons |
| C41 | TKH04* | No | Hold Tank | PVC41TKH04 | | 50,000 | Gallons |
| C41 | TKH05* | 4 | Hold Tank | PVC41TKH05 | | 50,000 | Gallons |
| C41 | TKA01* | No | Additive Tank | PVC41TKA01 | Cyclone VLS01 | 8,000 | Gallons |
| C41 | TKA02* | No | Additive Tank | PVC41TKA02 | Cyclone VLS01 | 8,000 | Gallons |
| C41 | TKA03* | 3 | Additive Tank | PVC41TKA03 | Cyclone VLS03 | 8,000 | Gallons |
| C41 | TKA04* | 3 | Additive Tank | PVC41TKA04 | Cyclone VLS05 | 8,000 | Gallons |
| C41 | TKA05* | 3 | Additive Tank | PVC41TKA05 | Cyclone VLS05 | 8,000 | Gallons |
| C41 | TKA06* | 3 | Additive Tank | PVC41TKA06 | Cyclone VLS05 | 8,000 | Gallons |
| C41A | TKA08* | 3 | Additive Tank | PVC41ATKA08 | Cyclone VLS08 | 8,000 | Gallons |
| C41A | TKA09* | No | Additive Tank | PVC41ATKA09 | Cyclone VLS09 | 8,000 | Gallons |
| C98 | TK001* | No | Land Application Tank | PVC98TK001 | | 10,000 | Gallons |
| C98 | TK002* | No | Land Application Tank | PVC98TK002 | | 600 | Gallons |
| C98 | TK003* | No | Land Application Tank | PVC98TK003 | | 15,000 | Gallons |
| C25 | TK2* | No | Land Application Tank | PVC25TK2 | | 500,000 | Gallons |
| C25 | TK3* | No | Land Application Tank | PVC25TK3 | | 1,000,000 | Gallons |
| C41A | TK001* | No | Condensate Tank | PVC41TK001 | | N/AV | N/AV |
| C41 | TK002* | No | Condensate Tank | PVC41TK002 | | N/AV | N/AV |
| C41 | TK003* | No | Condensate Tank | PVC41TK003 | | N/AV | N/AV |
| C44 | TKL21* | 6 | Liquid Bulk Tank | PVC44TKL21 | | 20,000 | Gallons |
| C44 | TKL22* | 6 | Liquid Bulk Tank | PVC44TKL22 | | 20,000 | Gallons |
| C44 | TKL31* | 6 | Liquid Bulk Tank | PVC44TKL31 | | 30,000 | Gallons |
| C44 | TKL32* | 6 | Liquid Bulk Tank | PVC44TKL32 | | 30,000 | Gallons |
| C44 | TKL33* | 6 | Liquid Bulk Tank | PVC44TKL33 | | 30,000 | Gallons |
| C44 | TKL34* | 6 | Liquid Bulk Tank | PVC44TKL34 | | 30,000 | Gallons |
| C44 | TKL35* | 6 | Liquid Bulk Tank | PVC44TKL35 | | 30,000 | Gallons |

| | | | | | | | |
|------|---------|---|------------------------|------------------|---------------------------------|--------|---------|
| C44 | TKL36* | 6 | Liquid Bulk Tank | PVC44TKL36 | | 30,000 | Gallons |
| C44 | TKL37* | 6 | Liquid Bulk Tank | PVC44TKL37 | | 30,000 | Gallons |
| C44 | TKL51* | 6 | Liquid Bulk Tank | PVC44TKL51 | | 50,000 | Gallons |
| C44 | TKL52* | 6 | Liquid Bulk Tank | PVC44TKL52 | | 50,000 | Gallons |
| C44 | TKL53* | 6 | Liquid Bulk Tank | PVC44TKL53 | | 50,000 | Gallons |
| C44 | TKL54* | 6 | Liquid Bulk Tank | PVC44TKL54 | | 50,000 | Gallons |
| C44A | AC410* | 7 | Vacuum Cleaning System | PVC44AACHOUSEVAC | Cyclone VS410B, Baghouse VS410A | N/A | N/A |
| C44 | WH059* | 5 | Weigh Hopper | PVC44VS059 | Baghouse VSWH059 | 8,000 | Kg |
| C44 | WH060* | 5 | Weigh Hopper | PVC44VS060 | Baghouse VSWH060 | 8,000 | Kg |
| C44 | WH061* | 5 | Weigh Hopper | PVC44VS061 | Baghouse VSWH061 | 8,000 | Kg |
| C43A | WI003 * | 1 | Weigh Indicator | ACC43AW001 | | N/AV | N/AV |

*Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).

** Control devices marked with a double asterisk are required to meet an applicable limitation.

*** A number indicates the Narasin Emission Unit that the equipment is associated with. A "NO" indicates that the equipment is not associated with the Narasin Process.

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

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

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from each fermenter (TKF01 through TKF32) shall not exceed 18.2 pounds per hour based on a maximum throughput of 9.256 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK047 (baghouse VS047) shall not exceed 1.4 pounds per hour based on a maximum throughput of 0.207 tons per hour.
- (c) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK048 (baghouse VS048) shall not exceed 1.2 pounds per hour based on a maximum throughput of 0.148 tons per hour.
- (d) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK049 (baghouse VS049) shall not exceed 1.2 pounds per hour based on a maximum throughput of 0.148 tons per hour.
- (e) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK050 (baghouse VS050) shall not exceed 1.8 pounds per hour based on a maximum throughput of 0.284 tons per hour.
- (f) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK051 (baghouse VS047) shall not exceed 1.4 pounds per hour based on a maximum throughput of 0.207 tons per hour.
- (g) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK052 (baghouse VS052) shall not exceed 0.9 pounds per hour based on a maximum throughput of 0.105 tons per hour.

- (h) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK053 (baghouse VS052) shall not exceed 0.9 pounds per hour based on a maximum throughput of 0.105 tons per hour.
- (i) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK054 (baghouse VS050) shall not exceed 1.8 pounds per hour based on a maximum throughput of 0.284 tons per hour.
- (j) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK055 (baghouse VS055) shall not exceed 1.2 pounds per hour based on a maximum throughput of 0.148 tons per hour.
- (k) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK056 (baghouse VS055) shall not exceed 1.2 pounds per hour based on a maximum throughput of 0.148 tons per hour.
- (l) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK057 (baghouse VS055) shall not exceed 1.2 pounds per hour based on a maximum throughput of 0.148 tons per hour.
- (m) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the vibrating bin TK058 (baghouse VS055) shall not exceed 1.2 pounds per hour based on a maximum throughput of 0.148 tons per hour.
- (n) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the batch fermenter tank TK301 (filter FLT301 and baghouse VS311) shall not exceed 2.1 pounds per hour based on a maximum throughput of 0.372 tons per hour.
- (o) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the batch fermenter tank TK302 (filter FLT302 and baghouse VS311) shall not exceed 2.1 pounds per hour based on a maximum throughput of 0.372 tons per hour.

D.2.2 NESHAP for Pharmaceuticals Production Non-Applicability Determination [40 CFR Part 63, Subpart GGG]

As stated in the Permittee's Notification of Compliance Status Report (NOCSR), submitted on March 20, 2003, which was submitted to satisfy the requirements of 40 CFR 63.1260(f), the fermentation processes are not subject to any of the emission reduction requirements in 40 CFR 63.1253 through 63.1256. Any modification made to these processes that changes the information submitted in the Permittee's NOCSR must be reported to IDEM as required by Condition F.1.12. If a new process operating scenario will trigger applicable requirements not described in this permit or compliance with applicable requirements shall be demonstrated by methodologies not described in this permit, this permit must be revised pursuant to 326 IAC 2-7-12.

D.2.3 Volatile Organic Compounds (VOCs) [326 IAC 2-2-3]

The VOC emissions from the fermenter emission unit, identified as EU-3 operating under the flexible permit conditions in Section F.2 shall not exceed one hundred (100) tons per twelve (12) month period, rolled on a calendar month basis.

During the first calendar year after permit issuance; VOC emissions from the fermenter emission unit (EU-3) operating under the flexible permit conditions shall not exceed eight and one third (8.33) tons multiplied by the number of calendar months the permit has been in effect.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: AHM - Product Recovery Operations

(a) The following Unit IDs have applicable conditions in this D Section:

| Bldg. | Unit ID* | Narasin Emission Unit*** | Unit Description | Stack/Vent ID | Control** | Capacity | Units |
|-------|------------|--------------------------|---------------------------|---------------|--|----------|----------|
| C45A | BL410 | 8 | RECYCLE BLENDER | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | CENT401 B* | 8 | CENTRIFUGE | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | CENT401 C* | 8 | CENTRIFUGE | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | COS401 D | 8 | SCREW CONVEYOR | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | COS420A | 8 | SCREW CONVEYOR | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | COS420L | 8 | SCREW CONVEYOR | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | COS421A * | 8 | SCREW CONVEYOR | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | COS421L * | 8 | SCREW CONVEYOR | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | D420 | 8 | DRYER | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | D421 | 8 | DRYER | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | EV450* | 8 | EVAPORATOR | PVC45AAC460 | Vent Condenser HE450E, Carbon Adsorber CA460** | 180 | Gallo ns |
| C45A | SM410A | 8 | SCREW CONVEYOR MIXER | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45 | TK370A* | 9 | NEW AMYL TANK | PVC45TK370A | | 38,265 | Gallo ns |
| C45 | TK370B* | 9 | NEW AMYL TANK | PVC45TK370B | | 20,834 | Gallo ns |
| C45A | TK401* | 8 | WASH ALCOHOL HOLDING TANK | PVC45AAC460 | Carbon Adsorber CA460** | 3,620 | Gallo ns |

| | | | | | | | |
|------|---------|----|--------------------|----------------|-------------------------|--------|----------|
| C45A | TK401G* | 8 | STORAGE TANK | PVC45AAC460 | Carbon Adsorber CA460** | 1,342 | Gallo ns |
| C45A | TK450N* | 8 | STORAGE TANK | PVC45AAC460 | Carbon Adsorber CA460** | 36 | Gallo ns |
| C45 | VS156 | No | TRANSFER BAGHOUSE | PVC45AC156A | | N/A | N/A |
| C45 | VS173 | No | TRANSFER BAGHOUSE | PVC45AC173 | | N/A | N/A |
| C45 | VS174 | No | TRANSFER BAGHOUSE | PVCAC174A/174B | | N/A | N/A |
| C45A | VS400* | 5 | TRANSFER BAGHOUSE | PVC45AAC400A | | N/A | N/A |
| C45A | VS420B* | 8 | TRANSFER BAGHOUSE | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | VS421B* | 8 | TRANSFER BAGHOUSE | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | VS480A* | 8 | TRANSFER BAGHOUSE | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45A | VS480B* | 8 | TRANSFER BAGHOUSE | PVC45AAC460 | Carbon Adsorber CA460** | N/A | N/A |
| C45 | EV101 | 8 | EVAPORATOR | PVC45AAC460 | Carbon Adsorber CA460** | 9,000 | Gallo ns |
| C45 | TK350C* | 8 | RECYCLED AMYL TANK | PVC45TK350C | | 20,834 | Gallo ns |
| C45 | TK350D* | 8 | RECYCLED AMYL TANK | PVC45TK350D | | 20,834 | Gallo ns |
| C45 | TK360C* | No | RECYCLED AMYL TANK | PVC45TK360C | | 20,834 | Gallo ns |
| C45 | TK361C* | No | RECYCLED AMYL TANK | PVC45TK361C | | 20,834 | Gallo ns |

*Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).

** Control devices marked with a double asterisk are required to meet an applicable limitation.

*** A number indicates the Narasin Emission Unit that the equipment is associated with. A "NO" indicates that the equipment is not associated with the Narasin Process.

(b) The following Unit IDs are not subject to applicable requirements, and are listed only for informational purposes

| Bldg. | Unit ID* | Narasin Emission Unit*** | Unit Description | Stack/Vent ID | Control** | Capacity | Units |
|-------|----------|--------------------------|-------------------------|---------------|-----------|----------|---------|
| C45 | EV002 | No | EVAPORATOR | PVC45EV002 | | 9,000 | Gallons |
| C45 | TK407* | No | CONTENTS EVAPS CLEANING | PVC45AAC407 | | 15,000 | Gallons |
| C45 | TK408* | 8 | CONTENTS EVAPS CLEANING | PVC45AAC408 | | 15,000 | Gallons |
| C45 | C24* | No | CENTRIFUGE | N/A | | N/A | N/A |
| C45 | CENT114* | No | CENTRIFUGE | N/A | | N/A | N/A |

| | | | | | | | |
|-----|-------------|----|------------------------------|-------------|-----------------------|-------|---------|
| C45 | CENT115* | No | CENTRIFUGE | N/A | | N/A | N/A |
| C45 | CENT116* | No | CENTRIFUGE | N/A | | N/A | N/A |
| C45 | CENT117* | No | CENTRIFUGE | N/A | | N/A | N/A |
| C45 | COL201* | No | DISTILLATION COLUMN | PVC45TK201 | | 2,100 | Gallons |
| C45 | COL204* | 8 | DISTILLATION COLUMN | PVC45TK204 | | 3,800 | Gallons |
| C45 | COL219* | No | DISTILLATION COLUMN | PVC45TK219 | | 3,800 | Gallons |
| C45 | COS109A | No | SCREW CONVEYOR | PVC45AC140A | Carbon Adsorber CA140 | N/A | N/A |
| C45 | COS109B* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C45 | COS109D* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C45 | COS109G* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C45 | COS153* | 8 | SCREW CONVEYOR | PVC45COS153 | Vent Sock VS153B | N/A | N/A |
| C45 | COS160A* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C45 | COS160B* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C45 | COS260* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C45 | D160/VLS160 | No | DRYER/VAPOR-LIQUID SEPARATOR | PVC45CA140A | Carbon Adsorber CA140 | N/A | N/A |
| C45 | D260/VLS260 | No | DRYER/VAPOR-LIQUID SEPARATOR | PVC45CA140A | Carbon Adsorber CA140 | N/A | N/A |
| C45 | D16/VS16* | No | DRYER/TRANSFER BAGHOUSE | PVC45AC016A | | N/A | N/A |
| C45 | DP17* | No | DRUM PACKER | PVC45AC18 | Baghouse VS18 | N/A | N/A |
| C45 | EV108* | No | EVAPORATOR | PVC45EV108 | | 1,000 | Gallons |
| C45 | EV202* | No | EVAPORATOR | PVC45EV202 | | 937 | Gallons |
| C45 | FIL109 | No | FILTER BELT | PVC45AC140A | Carbon Adsorber CA140 | N/A | N/A |
| C45 | VF109* | No | VIBRATORY FEEDER | PVC45AC18 | Baghouse VS18 | N/A | N/A |
| C45 | H107* | No | HOPPER | PVC45AC18 | Baghouse VS18 | N/A | N/A |
| C45 | SCF160* | No | SCREW CONV. FEEDER | N/A | | N/A | N/A |
| C45 | SCF260* | No | SCREW CONV. FEEDER | N/A | | N/A | N/A |
| C45 | SCR17* | No | SCREENER | PVC45AC18 | Baghouse VS18 | N/A | N/A |
| C45 | SM109* | No | SCREW CONV. MIXER | PVC45AC140A | Carbon Adsorber CA140 | N/A | N/A |
| C45 | SM153 | No | SCREW CONVEYOR MIXER | PVC45SM153 | Vent Sock VS153 | N/A | N/A |

| | | | | | | | |
|------|---------------|----|---------------------------|--------------|--------------------------|--------|---------|
| C45 | TK2A* | No | AMYL & WATER TK | N/A | | 50 | Gallons |
| C45 | TK8A* | No | PRODUCTION TK EV 202 | PVC45ATK008A | | 3,000 | Gallons |
| C45 | TK8B* | No | PRODUCTION TK EV 202 | PVC45ATK008B | | 3,000 | Gallons |
| C45 | TK8C* | No | RINSE WATER TANK | PVC45ATK008C | | 3,000 | Gallons |
| C45 | TK8D* | No | RINSE WATER TANK | PVC45ATK008D | | 3,000 | Gallons |
| C45 | TK8E* | No | RINSE WATER TANK | PVC45ATK008E | | 3,000 | Gallons |
| C45 | TK8F* | No | CLEANING SOLUTION | PVC45ATK008F | | 100 | Gallons |
| C45 | TK14A* | No | PROCESS TANK | PVC45TK14A | | 1,000 | Gallons |
| C45 | TK14B* | No | EVAP. TANK FOR COL 202 | PVC45TK14B | | 1,000 | Gallons |
| C45 | TK14C* | No | PROCESS TANK | N/A | | 1,000 | Gallons |
| C45 | TK14D* | No | PROCESS TANK | PVC45TK14D | | 1,000 | Gallons |
| C45 | TK18A* | No | PRODUCTION TANK | PVC45TK18A | | 1,300 | Gallons |
| C45 | TK20* | No | PRODUCTION TANK | PVC45TK020 | | 300 | Gallons |
| C45 | TK21* | No | SODIUM SLURRY TANK | PVC45AC140A | Carbon Adsorber CA140 | 1,100 | Gallons |
| C45 | TK22* | No | SODIUM SLURRY TANK | PVC45AC140A | Carbon Adsorber CA140 | 1,100 | Gallons |
| C45 | TK25* | No | CRYSTALS | PVC45AC140A | Carbon Adsorber CA140 | 500 | Gallons |
| C45 | TK107* | No | SOLVENT STORAGE TK | N/A | | 400 | Gallons |
| C45 | TK108B* | No | EVAP. TANK FOR EV 108 | N/A | | 68 | Gallons |
| C45 | TK109A* | No | AMYL & WATER | N/A | | 300 | Gallons |
| C45 | TK109C* | No | PRODUCTION TANK | PVC45HE109C | | 432 | Gallons |
| C45 | TK114A* | No | CENTRIFUGE TANK | PVC45AC140A | Carbon Adsorber CA140 | 470 | Gallons |
| C45 | TK114B* | No | CENTRIFUGE TANK | PVC45AC140A | Carbon Adsorber CA140 | 470 | Gallons |
| C45A | TK147/VS147* | 10 | STORAGE TANK | PVC45AAC147 | | 50 | tons |
| C45A | TK148/VS148* | 10 | STORAGE TANK | PVC45AAC148 | | 50 | tons |
| C45 | TK149/VS150C* | 5 | STORAGE TANK | PVC45AAC149 | | 16,638 | kg |
| C45 | TK151 | No | STORAGE TANK | PVC45TK151 | Vent Sock VS151A | N/A | N/A |
| C45 | TK152* | 8 | MATERIAL HANDLING | PVC45TK152 | Vent Sock VS152 | N/AV | N/AV |

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|------|----------|----|-----------------------------|--------------|---------------------|--------|---------|
| C45 | TK153* | 8 | MATERIAL HANDLING | PVC45TK153 | Vent Sock VS153A | N/AV | N/AV |
| C45 | TK201* | No | DECANTER FOR COL201 | PVC45TK201 | | 3,000 | Gallons |
| C45 | TK202C* | No | PROD. TK FOR EV202 | N/A | | 450 | Gallons |
| C45 | TK204* | 8 | DECANTER FOR COL204 | PVC45TK204 | | N/A | N/A |
| C45 | TK219* | No | DECANTER FOR COL219 | PVC45TK219 | | N/A | N/A |
| C45 | TK350B* | 8 | STRIPPER FEED TANK | PVC45TK350B | | 20,834 | Gallons |
| C45 | TK360B* | No | STRIPPER FEED TANK | PVC45TK360B | | 20,834 | Gallons |
| C45 | TK361B* | No | STRIPPER FEED TANK | PVC45TK361B | | 20,834 | Gallons |
| C45 | TK350A* | 8 | DECANTER | PVC45TK350A | | 20,834 | Gallons |
| C45 | TK360A* | No | DECANTER | PVC45TK360A | | 38,265 | Gallons |
| C45 | TK361A* | No | DECANTER | PVC45TK361A | | 38,265 | Gallons |
| C45 | TK380* | No | CLEANING SOLUTION TANK | PVC45TK380 | | 15,000 | Gallons |
| C45 | TK381* | No | CLEANING SOLUTION TANK | PVC45TK381 | | 15,000 | Gallons |
| C45A | TK490A* | No | WASTE TANK | PVC45ATK490A | | 3,500 | Gallons |
| C45A | TK490B* | No | WASTE TANK | PVC45ATK490B | | 450 | Gallons |
| C45 | VS17* | No | VACUUM CLEANING BAGHOUSE | PVC45AC17 | | N/A | N/A |
| C45 | VS172* | No | TRANSFER BAGHOUSE | PVC45AC172 | | N/A | N/A |
| C45 | VS107A* | No | TRANSFER BAGHOUSE | PVC45AC107 | | N/A | N/A |
| C45 | HE204C* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | HE204B* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | HE204A* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | HE204D* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | HE101H* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | HE101G* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | HE101B* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | HE101A* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45 | TK101A* | 8 | Tank | N/A | | N/A | N/A |
| C45A | TK450A* | 8 | Tank | N/A | | N/A | N/A |
| C45A | cos410B* | 8 | Coneyor | N/A | | N/A | N/A |
| C45A | VF400* | 8 | Feeder | N/A | | N/A | N/A |
| C45A | TK400C* | 8 | Hopper | N/A | | N/A | N/A |
| C45A | TK450F* | 8 | Tank | N/A | | N/A | N/A |
| C45A | HE450L* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45A | HE450P* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45A | HE420C* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45A | HE420J* | 8 | Heat Exchanger | N/A | | N/A | N/A |

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|------|----------|---|-----------------------|-----|--|-----|-----|
| C45A | HE421C* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45A | HE421J* | 8 | Heat Exchanger | N/A | | N/A | N/A |
| C45A | VLS420C* | 8 | Condensor/Sep/Receive | N/A | | N/A | N/A |
| C45A | VLS421C* | 8 | Condensor/Sep/Receive | N/A | | N/A | N/A |
| C45A | FLT480A* | 8 | Filter | N/A | | N/A | N/A |
| C45A | FLT480B* | 8 | Filter | N/A | | N/A | N/A |
| C45 | TK460* | 8 | Tank | N/A | | N/A | N/A |
| C45 | HE460B* | 8 | condensor | N/A | | N/A | N/A |
| C45 | FLT460* | 8 | Filter | N/A | | N/A | N/A |

*Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).
 ** Control devices marked with a double asterisk are required to meet an applicable limitation.
 *** A number indicates the Narasin Emission Unit that the equipment is associated with. A "NO" indicates that the equipment is not associated with the Narasin Process.

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

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

D.3.1 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the transfer baghouse VS156 shall not exceed 7.86 pounds per hour based on a maximum throughput of 2.64 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the transfer baghouse VS173 shall not exceed 7.86 pounds per hour based on a maximum throughput of 2.64 tons per hour.
- (c) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the transfer baghouse VS174 shall not exceed 9.85 pounds per hour based on a maximum throughput of 3.70 tons per hour.

D.3.2 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6] [326 IAC 2-2-3]

- (a) VOC emissions from the equipment routed to stack PVC45AAC460, shall be controlled by carbon adsorber CA460.
- (b) The carbon adsorber CA460 shall be operating at all times that the associated equipment is being operated. However, if there is a malfunction of the carbon adsorber CA460, the Permittee may finish processing any material that has entered equipment listed in this Section.
- (c) Carbon adsorber CA460 shall reduce VOC emissions by ninety-eight percent (98%), as measured by a comparison of the inlet and outlet concentrations to the carbon adsorber, unless outlet concentrations from the carbon adsorber are equal to or less than 30 parts per million (ppmv). These limitations shall be based on a 24-hour block average when the equipment ducted to CA460 is in operation.

D.3.3 [Reserved]

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for the CA460 carbon adsorber, which is used for compliance with an applicable limitation or standard. The requirements for a Preventive Maintenance Plan are described in Section B, Condition B.10 – Preventive Maintenance Plan.

Leak Detection and Repair Requirements

D.3.5 [Reserved]

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

D.3.6 Testing Requirements [326 IAC 2-7-6(1) and (6)]

No emissions testing is required for the emission units described in this Section, at this time, but IDEM may require testing at any specific time when necessary to determine if the facility is in compliance. The requirements for conducting performance tests that may be required by IDEM in the future, are described in Section C, Condition C.8 – Performance Testing.

D.3.7 Continuous Emissions Monitoring [326 IAC 2-1.1-11][326 IAC 3-5]

The Permittee shall continuously monitor the inlet and outlet VOC concentrations for carbon adsorber CA460. Continuous monitoring operation is defined as the collection of at least one measurement for each 15-minute block period while the equipment ducted to CA460 is in operation.

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

D.3.8 Record Keeping Requirements

- (a) The Permittee shall maintain records of the continuous monitoring required by Condition D.3.7. The records shall include data required by 326 IAC 3-5-6.
- (b) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain a complete, written continuous monitoring standard operating procedure (SOP) for the continuous emissions monitors. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).

D.3.9 [Reserved]

Modifications and Construction Requirements [326 IAC 2-7-10.5, 326 IAC 2-12 and 326 IAC 2-2]

D.3.10 Modifications and Construction: Advanced Approval of Permit Conditions

- (a) The Non Narasin emission units described in this D.3 Section are not subject to the advance approval permit conditions.
- (b) The Permittee may modify Narasin emission unit equipment listed in this section of the permit without obtaining a source modification approval (otherwise required by 326 IAC 2-7-10.5), a Title V permit modification (otherwise required by 326 IAC 2-7-12), or a Prevention of Significant Deterioration permit (otherwise required by 326 IAC 2-2), provided the modified emission units are subject to the same applicable requirements listed in this D section, and the Permittee shall comply with the Change Management and Flexible Permit provisions in Section F.2 of this permit.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: AHM - Product Finishing Operations

(a) The following Unit IDs have applicable conditions in this D Section:

| Bldg. | Unit ID* | Narasin Emission Unit*** | Unit Description | Stack/Vent ID | Control** | Capacity | Units |
|-------|----------|--------------------------|-------------------------|---------------|--|----------|-----------|
| C47 | BAG185* | 11 | BAGGER | PVC58AC190 | Baghouse VS183, Carbon Adsorber CA190** | N/A | N/A |
| C47E | BAG813* | No | BAGGER | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47E | BL808A* | No | BLENDER | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 1,000 | Cubic Ft. |
| C47E | BL808B* | No | BLENDER | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 1,000 | Cubic Ft. |
| C47E | BL809A* | No | BLENDER | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 1,000 | Cubic Ft. |
| C47E | BL809B* | No | BLENDER | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 1,000 | Cubic Ft. |
| C47E | BL811A* | No | BLENDER MIXER | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | 1,000 | Cubic Ft. |
| C47E | BL811B* | No | BLENDER MIXER | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | 1,000 | Cubic Ft. |
| C47E | BS812* | No | BAG SLITTER | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | BS812A* | No | MANUAL REFEED HOPPER | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/AV | N/AV |
| C47B | COD480* | No | DRAG CONVEYOR | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47B | COD481* | No | DRAG CONVEYOR | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47B | COD490* | No | DRAG CONVEYOR | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47B | COD491* | No | DRAG CONVEYOR | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47 | COE185* | 11 | BUCKET ELEVATOR | PVC58AC190 | Baghouse VS183, Carbon Adsorber CA190** | N/A | N/A |

| | | | | | | | |
|------|----------|----|--------------------|------------|--|--------|-------|
| C47B | COE440* | No | BUCKET ELEVATOR | PVC59AC520 | Baghouse VS470, Carbon Adsorber CA520** | 13,200 | lb/hr |
| C47B | COE440A* | No | BUCKET ELEVATOR | PVC59AC520 | Baghouse VS460, Carbon Adsorber CA520** | N/A | N/A |
| C47B | COE450* | No | BUCKET ELEVATOR | PVC59AC520 | Baghouse VS460, Carbon Adsorber CA520** | N/A | N/A |
| C47B | COE451* | No | BUCKET ELEVATOR | PVC59AC520 | Baghouse VS460, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COE805* | No | BUCKET ELEVATOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COE807* | No | BUCKET ELEVATOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47 | COS185* | 11 | SCREW CONVEYOR | PVC58AC190 | Baghouse VS183, Carbon Adsorber CA190** | N/A | N/A |
| C47E | COS458* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS805A* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS805B* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS805C* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS805D* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS806A* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS806B* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS806C* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS806D* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS807* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS807A* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |

| | | | | | | | |
|------|----------|----|----------------------|------------|--|-----|-------|
| C47E | COS808* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS809* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS810A* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS810B* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS810C* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS810D* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS810E* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS811A* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS811B* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS811C* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS812A* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS812B* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | COS813* | No | SCREW CONVEYOR | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47 | CY006* | 11 | CYCLONE SEPARATOR | PVC58AC190 | Baghouse VS18, Carbon Adsorber CA190** | N/A | N/A |
| C47 | CY008* | 11 | CYCLONE SEPARATOR | PVC58AC190 | Baghouse VS17, Carbon Adsorber CA190** | N/A | N/A |
| C47B | CY461* | No | CYCLONE SEPARATOR | PVC59AC520 | Baghouse VS460, Carbon Adsorber CA520** | N/A | N/A |
| C47B | CY462* | No | CYCLONE SEPARATOR | PVC59AC520 | Baghouse VS460, Carbon Adsorber CA520** | N/A | N/A |
| C47B | CY471* | No | CYCLONE SEPARATOR | PVC59AC520 | Baghouse VS470, Carbon Adsorber CA520** | 660 | lb/hr |

| | | | | | | | |
|------|---------|----|-----------------------|------------|--|-----|-----------|
| | | 5 | TOTE BAG UNLOAD | | | | |
| C47 | DS101* | No | STATION | PVC47AC285 | Baghouse VS285 | 6.5 | Min/Tote |
| C47B | DS470* | No | TOTE BAG DRUM STATION | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47E | DS811* | No | TOTE BAG DRUM STATION | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47E | H101 | 11 | HOPPER | PVC47EH101 | Vent Sock H101SOCK | N/A | N/A |
| C47E | H102 | No | HOPPER | PVC47EH102 | Vent Sock H102SOCK | N/A | N/A |
| C47E | H103 | No | HOPPER | PVC47EH103 | Vent Sock H103SOCK | N/A | N/A |
| C47 | H180 | 11 | HOPPER | PVC47H180 | Vent Sock H180SOCK | N/A | N/A |
| C47B | H410* | No | HOPPER | PVC59AC520 | Vent Sock H410SOCK | N/A | N/A |
| C47B | H431* | No | HOPPER | PVC59AC520 | | N/A | N/A |
| C47E | H807* | No | HOPPER | PVC59AC520 | | N/A | N/A |
| C47E | H807A* | No | HOPPER | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | H812* | No | HOPPER | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | 60 | Cubic Ft. |
| C47E | H813C* | No | HOPPER | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47 | PC006* | 11 | PELLET COOLER | PVC58AC190 | Baghouse VS7, Carbon Adsorber CA190** | N/A | N/A |
| C47B | PC430* | No | PELLET COOLER | PVC59AC520 | Baghouse VS430A, Carbon Adsorber CA520** | N/A | N/A |
| C47 | PEL006* | 11 | PELLET MILL | PVC58AC190 | | N/A | N/A |
| C47B | PEL430* | No | PELLET MILL | PVC59AC520 | Baghouse VS430A, Carbon Adsorber CA520** | N/A | N/A |
| C47B | RM440* | No | ROLLER MILL | PVC59AC520 | Baghouse VS470, Carbon Adsorber CA520** | N/A | N/A |
| C47B | RM440A* | No | ROLLER MILL | PVC59AC520 | Baghouse VS470, Carbon Adsorber CA520** | N/A | N/A |
| C47B | RM480* | No | ROLLER MILL | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47B | RM481* | No | ROLLER MILL | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47B | SCR450* | No | SCREENER | PVC59AC520 | Baghouse VS460, Carbon Adsorber CA520** | N/A | N/A |

| | | | | | | | |
|------|---------|----|------------------|--------------|--|--------|-----------|
| C47B | SCR451* | No | SCREENER | PVC59AC520 | Baghouse VS460, Carbon Adsorber CA520** | N/A | N/A |
| C47E | SCR813* | No | SCREENER | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47B | SCR490* | No | SCREENER | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47B | SCR491* | No | SCREENER | PVC59AC520 | Baghouse VS480, Carbon Adsorber CA520** | N/A | N/A |
| C47 | SM182* | 11 | RIBBON MIXER | PVC58AC190 | Baghouse VS183, Carbon Adsorber CA190** | 1,000 | Cubic Ft. |
| C47 | SM280 | No | SCREW MIXER | PVC47SM280 | Vent Sock SM280SOCK | N/A | N/A |
| C47 | TB185* | 11 | TOTE BAGGER | PVC58AC190 | Baghouse VS183, Carbon Adsorber CA190** | N/A | N/A |
| C47E | TB813* | No | TOTE BAG FILLER | PVC59AC520 | Baghouse VS815B, Carbon Adsorber CA520** | N/A | N/A |
| C47E | TK101A | 11 | STORAGE TANK | PVC47ETK101A | | 1,900 | Cubic Ft. |
| C47E | TK101B | No | STORAGE TANK | PVC47ETK101B | | 1,900 | Cubic Ft. |
| C47E | TK102A | No | STORAGE TANK | PVC47ETK102A | | N/A | N/A |
| C47E | TK102B | No | STORAGE TANK | PVC47ETK102B | | N/A | N/A |
| C47E | TK103 | No | STORAGE TANK | PVC47EVS103A | Baghouse VS103** | 1,900 | Cubic Ft. |
| C47 | TK11A* | 5 | STORAGE TANK | PVC47TK11A | Vent Sock TK11ASOCK** | 2,000 | Cubic Ft. |
| C47 | TK11B* | 5 | STORAGE TANK | PVC47TK11B | Vent Sock TK11BSOCK** | 2,000 | Cubic Ft. |
| C47 | TK132* | No | MINERAL OIL TANK | PVC47TK132 | | 31,087 | Gallons |
| C47 | TK181 | 11 | STORAGE TANK | PVC47TK181 | Vent Sock TK181SOCK | 1,897 | Cubic Ft. |
| C47 | TK201A | No | SILO | PVC47AC201 | Vent Sock TK201ASOCK** | 1,900 | Cubic Ft. |
| C47 | TK201B | No | SILO | PVC47AC201 | | 1,900 | Cubic Ft. |
| C47 | TK270 | No | SILO | PVC47TK270 | | N/AV | N/AV |
| C47B | TK420 | No | STORAGE TANK | PVC47BVS420 | | 1,900 | Cubic Ft. |
| C47E | TK806A* | No | STORAGE TANK | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 2,000 | Cubic Ft. |
| C47E | TK806B* | No | STORAGE TANK | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 2,000 | Cubic Ft. |

| | | | | | | | |
|------|---------|----|----------------------|------------|--|-------|-----------|
| C47E | TK806C* | No | STORAGE TANK | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 2,000 | Cubic Ft. |
| C47E | TK806D* | No | STORAGE TANK | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | 2,000 | Cubic Ft. |
| C47 | VS001 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS010 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS017 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS018 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS180 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS182 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS183 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS201* | No | TRANSFER BAGHOUSE | PVC47AC201 | | N/A | N/A |
| C47 | VS210* | No | TRANSFER BAGHOUSE | PVC47AC210 | | N/A | N/A |
| C47 | VS004 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47 | VS400 | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47B | VS410 | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47B | VS430 | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47B | VS430A | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47B | VS431 | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47B | VS460 | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47B | VS470 | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47B | VS480 | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47 | VS007 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | N/A | N/A |
| C47E | VS810A* | No | TRANSFER BAGHOUSE | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | VS810B* | No | TRANSFER BAGHOUSE | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | VS810C* | No | TRANSFER BAGHOUSE | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |

| | | | | | | | |
|------|---------|----|------------------------------------|------------|---|-------|-----------|
| C47E | VS812* | No | TRANSFER BAGHOUSE | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | N/A | N/A |
| C47E | VS815A | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47E | VS815B | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47E | VS815C | No | TRANSFER BAGHOUSE | PVC59AC520 | Carbon Adsorber CA520** | N/A | N/A |
| C47E | WB805 | No | WEIGH BELT | PVC59AC520 | Baghouse VS815A, Carbon Adsorber CA520** | N/A | N/A |
| C47E | WH810A* | No | WEIGH HOPPER | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | 500 | Cubic Ft. |
| C47E | WH810B* | No | WEIGH HOPPER | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | 250 | Cubic Ft. |
| C47E | WH810C* | No | WEIGH HOPPER | PVC59AC520 | Baghouse VS815C, Carbon Adsorber CA520** | 500 | Cubic Ft. |
| C47C | VS601 | 11 | TRANSFER BAGHOUSE (Transfer Cycle) | PVC58AC190 | Carbon Adsorber CA190** | 37 | kg/min |
| | | | TRANSFER BAGHOUSE (Transfer Cycle) | | | 159 | |
| C47C | VS602 | 11 | TRANSFER BAGHOUSE (Mix Cycle) | PVC58AC190 | Carbon Adsorber CA190** | 159 | kg/min |
| C47C | VS603 | 11 | TRANSFER BAGHOUSE | PVC58AC190 | Carbon Adsorber CA190** | 159 | kg/min |
| C47C | BS612 | 11 | BAG SLITTER | PVC58AC190 | Carbon Adsorber CA190** | 131 | kg/min |
| C47C | FD603 | 11 | FEEDER | PVC58AC190 | Baghouse VS609**, Carbon Adsorber CA190** | 119 | kg/min |
| C47C | FD605 | 11 | FEEDER | PVC58AC190 | Baghouse VS609**, Carbon Adsorber CA190** | 12 | kg/min |
| C47C | TK610 | 11 | TANK | PVC58AC190 | Baghouse VS609**, Carbon Adsorber CA190** | 205.5 | kg/min |
| C47C | TK612 | 11 | TANK | PVC58AC190 | Baghouse VS609**, Carbon Adsorber CA190** | 262 | kg/min |
| C47C | BAG612 | 11 | BAGGER | PVC58AC190 | Baghouse VS609**, Carbon Adsorber CA190** | 131 | kg/min |
| C47C | FD604 | 11 | FEEDER | PVC58AC190 | Baghouse VS609** | 38 | kg/min |
| C47C | FD606* | 11 | FEEDER | PVC58AC190 | Baghouse VS609** | 35.2 | kg/min |

* Emission units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).

** Control devices marked with a double asterisk are required to meet an applicable limitation.
 ***A number indicates the Narasin Emission Unit that the equipment is associated with. A "NO" indicates that the equipment is not associated with the Narasin Process.

(b) The following Unit IDs are not subject to applicable requirements, and are listed only for informational purposes

| Bldg. | Unit ID* | Emission Unit | Unit Description | Stack/Vent ID | Control** | Capacity | Units |
|-------|----------|---------------|-------------------------|---------------|--------------------|----------|-----------|
| C47 | COS001* | 11 | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47E | COS101* | 5 | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47E | COS101A* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47E | COS101B* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47E | COS102* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47E | COS102A* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47E | COS102B* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47E | COS103* | No | SCREW CONVEYOR | N/A | | N/A | N/A |
| C47 | COS250A* | No | SCREW CONVEYOR | PVC47AC005B | Baghouse VS005B | N/A | N/A |
| C47 | D250* | No | FLUIDIZED BED DRY | PVC47AC005B | Baghouse VS005B | N/A | N/A |
| C47 | H012* | 5 | HOPPER | N/A | | N/A | N/A |
| C47 | H002* | 11 | HOPPER | N/A | | N/A | N/A |
| C47 | H201* | No | HOPPER | N/A | | N/A | N/A |
| C47 | H208* | No | HOPPER | PVC47AC005B | Baghouse VS005B | N/A | N/A |
| C47 | H270* | No | HOPPER | N/A | | N/A | N/A |
| C47 | H003* | 11 | HOPPER | N/A | | N/A | N/A |
| C47 | HM006* | 11 | HAMMER MILL | N/A | Vent Sock HM6SOCK | N/A | N/A |
| C47 | HM008* | 11 | HAMMER MILL | N/A | Vent Sock HM6SOCK | N/A | N/A |
| C47 | HM250* | No | HAMMER MILL | PVC47AC005B | | N/A | N/A |
| C47 | SCR006* | 11 | SCREENER | N/A | | N/A | N/A |
| C47 | SM210A* | No | RIBBON MIXER | PVC47AC005B | Baghouse VS005B | N/A | N/A |
| C47 | SM210B* | No | RIBBON MIXER | PVC47AC005B | Baghouse VS005B | N/A | N/A |
| C47 | SCR250* | No | SCREENERS | PVC47AC005B | | N/A | N/A |
| C47 | SUMP003* | No | WASTE SUMP | N/A | | 4,283 | Gallons |
| C47 | TK001A* | 11 | STORAGE TANK | PVC47TK1A | Vent Sock TK1ASOCK | 2,009 | Cubic Ft. |
| C47 | TK001B* | 11 | STORAGE TANK | PVC47TK1B | Vent Sock TK1BSOCK | 1,850 | Cubic Ft. |
| C47 | TK002* | No | STORAGE TANK | N/A | | 80 | Tons |
| C47 | TK180* | 11 | STORAGE TANK | N/A | | N/A | N/A |
| C47 | TK310* | No | TANK | PVC47TK310 | | 500 | Gallons |
| C47E | TK320* | No | LIQUID WASTE TANK | PVC47TK320 | | 2,400 | Gallons |
| C47 | TK320A* | No | TYLOSIN WASTEWATER TANK | PVC47TK320A | | 175 | Gallons |
| C47 | TK330* | No | JACKETED TANK | PVC47 TK330 | | 22,000 | Gallons |

| | | | | | | | |
|------|---------|----|-----------------------------------|--------------|--|-------|---------|
| C47 | TK340* | No | TYLOSIN HOT WATER TANK | PVC47TK340 | | 200 | Gallons |
| C47B | TK410A* | No | STORAGE TANK | N/A | | 36 | Tons |
| C47B | TK410B* | No | STORAGE TANK | N/A | | 36 | Tons |
| C47B | TK453* | No | WASTE SUMP, PROC. WATER | PVC47TK453 | | 1,000 | Gallons |
| C47 | TK006* | 11 | TRANSFER TANK | N/A | | N/A | N/A |
| C47E | TK803* | No | VEGETABLE OIL TANK | N/A | | 8,000 | Gallons |
| C47E | TK803A* | No | VEGETABLE OIL TANK | PVC47ETK803A | | 125 | Gallons |
| C47E | TK804A* | No | MINERAL OIL TANK | PVC47ETK804A | | 125 | Gallons |
| C47 | VS005B* | No | TRANSFER BAGHOUSE | PVC47AC005B | | N/A | N/A |
| C47 | VS011* | 5 | TRANSFER BAGHOUSE | PVC47AC11 | | N/A | N/A |
| C47E | VS101* | 5 | TRANSFER BAGHOUSE | PVC47EAC101A | | N/A | N/A |
| C47E | VS102* | No | TRANSFER BAGHOUSE | PVC47EAC102A | | N/A | N/A |
| C47 | VS013* | No | VACUUM CLEANING BAGHOUSE | PVC47AC13 | | N/A | N/A |
| C47 | VS170A* | No | VACUUM CLEANING BAGHOUSE | PVC47AC170A | | N/A | N/A |
| C47 | VS220* | No | TRANSFER BAGHOUSE | PVC47AC220 | | N/A | N/A |
| C47 | VS270* | No | TRANSFER BAGHOUSE | PVC47AC270 | | N/A | N/A |
| C47 | VS280* | No | TRANSFER BAGHOUSE | PVC47AC280 | | N/A | N/A |
| C47 | VS285* | No | TRANSFER BAGHOUSE | PVC47AC285 | | N/A | N/A |
| C47B | VS510* | No | VACUUM CLEANING BAGHOUSE | PVC47BAC510 | | N/A | N/A |
| C47E | VS815D* | No | VACUUM CLEANING BAGHOUSE | PVC47EAC815D | | N/A | N/A |
| C47C | VS617* | No | VACUUM CLEANING BAGHOUSE | PVC47CAC617 | | NA | NA |
| C47C | BL601A* | 11 | BLENDING SILO (Transfer Cycle) | PVC47CBL601A | | 37 | kg/min |
| C47C | BL601B* | 11 | BLENDING SILO (Transfer Cycle) | PVC47CBL601B | | 37 | kg/min |
| C47C | BL602A* | 11 | BLENDING SILO (Transfer Cycle) | PVC47CBL602A | | 159 | kg/min |
| | | | BLENDING SILO (Mix Cycle) | | | 159 | |
| C47C | BL602B* | 11 | BLENDING SILO (Transfer Cycle) | PVC47CBL602B | | 159 | kg/min |
| | | | BLENDING SILO (Mix Cycle) | | | 159 | |
| C47C | VS604* | 11 | TRANSFER BAGHOUSE | PVC47CC604 | | 50 | kg/min |
| C47C | BS606 | 11 | BAG SLITTER | PVC47CBS606 | | 47 | kg/min |

| | | | | | | | |
|------|---------|----|----------------|-----|--|-----|-----|
| C47 | TK005 | 11 | Tank | N/A | | N/A | N/A |
| C47 | H182 | 11 | Hopper | N/A | | N/A | N/A |
| C47 | SCR185A | 11 | Screener | N/A | | N/A | N/A |
| C47 | TK185A | 11 | Tank | N/A | | N/A | N/A |
| C47 | BS140 | 11 | Bag Slitter | N/A | | N/A | N/A |
| C47 | COE140 | 11 | Conveyor | N/A | | N/A | N/A |
| C47C | HS612 | 11 | Heat Selaer | N/A | | N/A | N/A |
| C47C | NS612 | 11 | Neck Stretcher | N/A | | N/A | N/A |
| C47C | COE605 | 11 | Conveyor | N/A | | N/A | N/A |
| C47C | COE612 | 11 | Conveyor | N/A | | N/A | N/A |
| C47C | TK608 | 11 | Tank | N/A | | N/A | N/A |
| C47C | SCR611 | 11 | Screener | N/A | | N/A | N/A |
| C47C | MX610 | 11 | Mixer | N/A | | N/A | N/A |
| C47C | COE606 | 11 | Conveyor | N/A | | N/A | N/A |
| C47C | TK606 | 11 | Tank | N/A | | N/A | N/A |
| C47C | DS607 | 11 | Dump Station | N/A | | N/A | N/A |
| C47C | COE607 | 11 | Coneyor | N/A | | N/A | N/A |
| C47C | H140 | 11 | Hopper | N/A | | N/A | N/A |
| C47C | FD607 | 11 | Feeder | N/A | | N/A | N/A |

* Emission units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).
 ** Control devices marked with a double asterisk are required to meet an applicable limitation.
 ***A number indicates the Narasin Emission Unit that the equipment is associated with. A "NO" indicates that the equipment is not associated with the Narasin Process.

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

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

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

Pursuant to 326 IAC 6-3-2, C47 finishing process equipment shall be limited as follows:

| Condition Subpart | Unit ID | Stack/Vent ID | Maximum Process Weight Rate (tons/hr) | Emissions Limitation (lb/hr) |
|-------------------|---------|---------------|---------------------------------------|------------------------------|
| a. | H101 | PVC47EH101 | 12.0 | 21.7 |
| b. | H102 | PVC47EH102 | 9.60 | 18.7 |
| c. | H103 | PVC47EH103 | 24.0 | 34.5 |
| d. | SM280 | PVC47SM280 | 0.66 | 3.11 |
| e. | TK101A | PVC47ETK101A | 6.00 | 13.6 |
| f. | TK101B | PVC47ETK101B | 6.00 | 13.6 |
| g. | TK102A | PVC47ETK102A | 4.80 | 11.7 |
| h. | TK102B | PVC47ETK102B | 4.80 | 11.7 |
| i. | TK103 | PVC47EVS103A | 24.0 | 34.5 |
| j. | TK11A | PVC47TK11A | 0.06 | 0.59 |
| k. | TK11B | PVC47TK11B | 0.06 | 0.59 |
| l. | TK181 | PVC47TK181 | 0.79 | 3.49 |
| m. | TK201A | PVC47AC201 | 0.47 | 2.45 |
| n. | TK201B | PVC47AC201 | 0.47 | 2.45 |
| o. | TK270 | PVC47TK270 | 0.66 | 3.11 |
| p. | TK420 | PVC47BVS420 | 0.03 | 0.36 |
| q. | VS201 | PVC47AC201 | 0.47 | 2.45 |
| r. | VS210 | PVC47AC210 | 0.47 | 2.45 |
| s. | H180 | PVC47H180 | 1.57 | 5.55 |
| t. | FD603 | PVC58AC190 | 7.85 | 16.31 |
| u. | FD605 | PVC58AC190 | 0.79 | 3.51 |
| v. | TK610 | PVC58AC190 | 13.56 | 23.52 |
| w. | TK612 | PVC58AC190 | 17.29 | 27.68 |
| x. | BAG612 | PVC58AC190 | 8.65 | 17.40 |
| y. | FD604 | PVC58AC190 | 2.51 | 7.59 |
| z. | FD606 | PVC58AC190 | 2.32 | 7.21 |
| aa | DS101 | PV47AC285 | 4.78 | 11.7 |

D.4.2 Best Available Control Technology (BACT) [326 IAC 2-2-3] [326 IAC 8-1-6] [SSM 165-12309] [SSM 165-25636-00009]

-
- (a) VOC emissions from the equipment routed to stack PVC59AC520, shall be controlled by carbon adsorber CA520.
 - (b) The carbon adsorber CA520 shall be operating at all times that the associated equipment is being operated. However, if there is a malfunction of the carbon adsorber CA520, the Permittee may finish processing any material that has entered the pellet mill PEL430.

- (c) Carbon adsorber CA520 shall reduce VOC emissions by ninety-five percent (95%), as measured by a comparison of the inlet and outlet concentrations to the carbon adsorber, unless outlet concentrations from the carbon adsorber are equal to or less than 10 parts per million (ppm). These limitations shall be based on a 3-hour block average.
- (d) VOC emissions from the equipment routed to stack PVC58AC190, as described in the facility description above, shall be controlled by carbon adsorber CA190.
- (e) The carbon adsorber CA190 shall be operating at all times that the associated equipment is being operated. However, if there is a malfunction of the carbon adsorber CA190, the Permittee may finish processing any material that has entered the pellet mill PEL006.
- (f) Carbon adsorber CA190 shall reduce VOC emissions by ninety-eight percent (98%), as measured by a comparison of the inlet and outlet concentrations to the carbon adsorber, unless outlet concentrations from the carbon adsorber are equal to or less than 10 parts per million (ppmv). These limitations shall be based on a 24-hour block average when the equipment vented to CA190 is in operation.

D.4.2.1 PM and PM10 Control Requirements

- (a) The PM and PM10 emissions from feeders FD603, FD604, FD605, and FD606; tanks TK610 and TK612; waste drum; and bagger BAG612 shall be controlled by baghouse VS609.
- (b) Baghouse VS609 shall be operated at all times that the equipment specified in Condition D.4.2.1(a) is being operated. However, if there is a malfunction of Baghouse VS609, the Permittee may finish processing any material that has entered the pellet mill PEL006.
- (c) Baghouse VS609 shall reduce particulate matter emissions by 99.9%. This limitation shall be based on a 1-hour block average. Compliance with this condition shall limit the total PM and PM10 emissions to less than 25 and 15 tons/year, respectively, for the emission units described in the modification permitted under SSM 165-25636-00009, and will render 326 IAC 2-2 not applicable to the modification permitted under SSM 165-25636-00009.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the carbon adsorbers CA190 and CA520 and Baghouse VS609. The requirements for a Preventive Maintenance Plan are described in Section B, Condition B.10 – Preventive Maintenance Plan.

D.4.4 [Reserved]

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

D.4.5 Testing Requirements [326 IAC 2-7-6(1) and (6)]

No emissions testing is required for the emission units described in this Section, at this time, but IDEM may require testing at any specific time when necessary to determine if the facility is in compliance. The requirements for conducting performance tests that may be required by IDEM in the future, are described in Section C, Condition C.8 – Performance Testing.

D.4.6 Continuous Emissions Monitoring [326 IAC 2-1.1-11] [326 IAC 3-5]

The Permittee shall continuously monitor the inlet and outlet VOC concentrations for carbon adsorbers CA520 and CA190. Continuous monitoring operation is defined as the collection of at least one measurement for each successive 15-minute period.

SECTION D.16 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Insignificant Activities

- (a) Cold-cleaning organic solvent degreasing operations that do not exceed 145 gallons of solvent usage per 12 months, except if subject to 326 IAC 20-6.

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

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

D.16.1 Cold-Cleaner Degreasers Constructed between January 1, 1980 and July 1, 1990 [326 IAC 8-3-2]

For each cold-cleaner degreaser constructed between January 1, 1980 and July 1, 1990, the Permittee shall:

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

D.16.2 Cold-Cleaner Degreasers Constructed after July 1, 1990 [326 IAC 8-3-5]

For each cold-cleaner degreaser constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than 2 kPa (15 mm Hg or 0.3 psi) measured at 38°C (100°F);
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than 4.3 kPa (32 mm Hg or 0.6 psi) measured at 38°C (100°F), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (A) A readily visible marker, containing sufficient information to clearly designate which item of equipment is leaking, shall be attached, to the leaking equipment, or as near as is practicable and safe.
- (B) The marker shall also indicate the date the leak was identified, and the individual who identified the leak. If an observation of visual, audible, or olfactory indications of a leak is confirmed as a leak via M21 monitoring, the date of the monitoring is the date the leak was identified, and the individual performing the monitoring is the individual who identified the leak. When a leak is identified by visual, audible, or olfactory observation, and M21 confirmation is not done, the individual who observed the indications of a leak is the individual who identified the leak, and the date of identification is the date the evidence of a leak was first observed.
- (C) The identification may be removed after the equipment has been repaired.
 - (1) When each leak is detected,
 - (A) The leak shall be repaired as soon as practicable.
 - (B) A first attempt at repair shall be made not later than 5 calendar days after the leak is detected.
 - (C) The leak shall be repaired not later than 15 calendar days after the leak is detected.
 - (5) It is a violation of this section to fail to take action to repair a leak within the specified time. If action is taken to repair the leak within the specified time, failure of that action to successfully repair the leak is not a violation of this section. However, if the repairs are unsuccessful, a leak is detected and the permittee shall take further action as specified in (e)(3) above.
 - (6) Delay of Repair of equipment for which a leak has been detected is allowed if one of the conditions in (6)(A), (6)(B) or (6)(D) applies:
 - (A) The repair is technically infeasible without a process shutdown. The physical work to repair this equipment shall occur by the end of the next scheduled process shutdown.
 - (B) The owner or operator determines that repair personnel would be exposed to an immediate danger if attempting to repair without a process shutdown. The physical work to repair this equipment shall occur by the end of the next scheduled process shutdown.
 - (C) Repair, as defined in this section (i.e., including inspection or monitoring to confirm success), shall be completed either on the date of equipment restart, or within 15 VOC service days, where the equipment has been in VOC service at any point during the calendar day, after the leak was identified, whichever is later.
 - (D) The provisions for delay of repair at 40 CFR 63.171(b)-(e) shall also apply.
- (f) Recordkeeping
 - (1) A record explaining how equipment subject to this section is identified such that it can be distinguished from equipment not subject to this section.

SECTION F.2 EMISSIONS UNIT OPERATION CONDITIONS CHANGE MANAGEMENT AND FLEXIBLE PERMIT CONDITIONS FOR THE NARASIN PROCESS EQUIPMENT

Emissions Unit Description:

The information described in the following paragraphs is descriptive information and does not constitute enforceable conditions:

Section F.2 is applicable to process equipment directly associated with the Narasin production. Some of the equipment associated with Narasin production may be used to make other products (herein referred to as Non Narasin Process) when it is not making Narasin.

The Narasin production equipment that IS affected by the proposed modifications include:

- Fermentation Batch Make-up (Emission Unit: EU-1)
- Fermentation Bump Tanks (EU-2)
- Fermenters (EU-3)
- Fermentation Harvest Tanks (EU-4)
- Dry Raw Materials Unloading and Storage (EU-5)
- Liquid Raw Materials Unloading and Storage (EU-6)
- Fermentation Vacuum Cleaning (EU-7)
- Recovery Process (EU-8)
- New Amyl Alcohol Unloading and Storage (EU-9)
- New Clay Unloading and Storage (EU-10)
- Finishing Process (EU-11)

The areas and manufacturing processes that ARE NOT affected by the proposed modifications include:

- Non-Narasin Fermentation Operations
- Non-Narasin Recovery Operations
- Non-Narasin Finishing Operations Analytical Support Laboratories
- Boilers for steam production
- Utilities operations
- Waste Water Treatment 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 2-7-5(1)]

F.2.1 Emission Limits [326 IAC 2-2]

VOC emissions from the facilities operating under the flexible permit conditions shall not exceed three hundred (300) tons per 12-month period, rolled on a calendar month basis.

During the first calendar year after permit issuance; VOC emissions from the facilities operating under the flexible permit conditions shall not exceed twenty five (25) tons multiplied by the number of calendar months the permit has been in effect.

VOC emissions limits from the fermenter emission unit (EU-3) are included in Section D.2.3.

F.2.2 Site Modifications and Advance Approval of Modifications [326 IAC 2-7-5(9)] [326 IAC 2-7-5(16)]

The Permittee may make modifications described in subsection (a) below to the operations described in Section F.2 of this permit. If actual emissions do not exceed the limits in Section F.2.1, and the Permittee complies with the other provisions of this section, then the

Permittee is not required to obtain a source modification approval (otherwise required by 326 IAC 2-7-10.5), a Title V permit modification (otherwise required by 326 IAC 2-7-12), or a Prevention of Significant Deterioration permit (otherwise required by 326 IAC 2-2).

(a) Permitted Modifications

The Permittee may implement changes, including but not limited to, the following modifications in the Narasin Process Equipment (Emission Units 1 - 11) without triggering the administrative review processes described above:

- (1) Process changes to the Narasin process, including but not limited to, raw material storage/utilization, process operating conditions, process operating steps, product specifications, final products manufactured;
- (2) Changes to existing equipment in the Narasin process, including but not limited to, a physical change to existing equipment, reconstruction, or replacement of existing equipment. Equipment includes but is not limited to: Storage tanks/bins/silos, process tanks/bins/hoppers, cyclones, material transfer equipment/piping/ducting, evaporators, heat exchangers, condensers, columns, mills, coolers, screeners, mixers, feeders, baggers, heat exchangers, decanters, dryers, baghouses;
- (3) Addition of new equipment to the Narasin process, including but not limited to, Storage tanks/bins/silos, process tanks/bins/hoppers, cyclones, material transfer equipment/piping/ducting, evaporators, heat exchangers, condensers, columns, mills, coolers, screeners, mixers, feeders, baggers, heat exchangers, decanters, dryers, baghouses;
- (4) Reconstruction or replacement of existing production buildings.
- (5) Each type of change included in Sections F.2.2(a)(1), F.2.2(a)(2), F.2.2(a)(3), and F.2.2(a)(4) could occur by itself, or in combination with one or more of the other types of changes.

(b) Advance Approval and Applicable Requirements

In addition to the emission limits identified in Condition F.2.1 of this permit, the emission limits and standards, testing and monitoring requirements, record keeping requirements, reporting requirements, and other permit conditions applicable to the type of equipment or operation being modified, replaced, reconstructed or installed are described in Sections D.2, D.3, and D.4 of this permit. Each modification will be subject to the relevant provisions of those permit conditions. If a modification would cause an applicable requirement that is not described in this permit to apply, the Permittee shall obtain a source modification approval if otherwise required by 326 IAC 2-7-10.5 and a Title V permit modification pursuant to 326 IAC 2-7-12.

F.2.3 Volatile Organic Compound (VOC) Emission Limit Determination

The Permittee shall determine actual annual emissions, in tons, each quarter by employing the following techniques:

- (a) The following requirements apply to the Carbon Adsorbers CA460 and CA190:
- (1) VOC measurement: The requirements for measuring VOC concentrations in the exhaust gas are described in Sections D.3 and D.4.
 - (2) Gas flow rate measurement: The Permittee shall measure the actual gas flow rate at the carbon adsorbers with a flow monitoring system, or determine it with engineering calculations.
 - (3) Emission calculation: The Permittee shall calculate VOC emissions by using the VOC concentration data and gas flow rate.

- (4) Data substitution:
 - (A) During periods of CEMS calibration, the Permittee shall substitute in one minute increments, the last valid VOC concentration measurement obtained prior to the calibration in lieu of actual readings from the VOC CEMS.
 - (B) During periods of flow meter calibration, the Permittee shall substitute in one minute increments, the last valid gas flow rate measurement obtained prior to the calibration in lieu of actual readings from the flow meter.
 - (C) During periods of CEMS maintenance, malfunction, or repair; other periods of invalid VOC data collection; or any periods when VOC CEMS may not be operating and its operation is not required for compliance the Permittee shall substitute the applicable concentration based limit in lieu of actual readings from the VOC CEMS
 - (D) During periods of flow meter maintenance, malfunction, or repair; other periods of invalid gas flow rate data collection; or any periods when flow meter may not be operating and its operation is not required for compliance, the Permittee shall substitute span value of the flowmeter or the highest expected flow based on historical operation.
- (5) Minimum data collection requirements:

The requirements for monitoring and recording VOC concentrations are described in Section D.3 and D.4.
- (b) Emissions not vented to the Carbon Adsorbers CA460/CA190:

The Permittee shall determine monthly point source VOC emissions from emission units not vented through the carbon adsorbers. The Permittee may use engineering calculation methods based on ideal gas law equations, stoichiometry, or mass balance to estimate these emissions.
- (c) Emissions during Carbon Adsorber CA460/CA190 bypass periods:

The Permittee shall determine monthly VOC emissions during bypass periods. The Permittee may use engineering calculation methods based on ideal gas law equations, stoichiometry, or mass balance to estimate these emissions.
- (d) Fugitive Emissions:
 - (1) The Permittee shall determine monthly fugitive VOC emissions. Emissions for all component types except connectors will be calculated using the "SOCMI Average Emission factors" found at Table 2-1 of the EPA document "Protocol for Equipment Leak Emission Estimates," EPA-453/R-95-017, November 1995. As this document does not provide for any adjustment in connector emissions for the connector's service conditions, the connector emission factors developed by the Texas Council on Environmental Quality (TCEQ) for that purpose will be used. These are found in the TCEQ document "Emissions Factors for Equipment Leak Fugitive Components" (Addendum to RG-360A, January 2008) The emission control factor for an audible/visible/olfactory leak repair program will also be taken from TCEQ, in this case from the TCEQ document "Air Permit Technical Guidance for Chemical Sources: Equipment Leak Fugitives" (October, 2000).

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

F.2.4 Records and Reporting of Emissions

- (a) The Permittee shall record and maintain records of all information necessary for estimating emissions including all measurements and calculations described in Conditions F.2.2 and F.2.3.
- (b) The Permittee shall submit a quarterly report of actual emissions of VOC, as determined in accordance with Sections F.2.2 and F.2.3.

F.2.5 Records and Reporting of Site Modifications [326 IAC 2-7-5(16)] [326 IAC 2-7-20(a)][40 CFR 63.1259] [40 CFR 63.1260]

- (a) Changes made pursuant to advance approval provisions:

The Permittee shall record and maintain records of all modifications that would have otherwise required a revision to this permit pursuant to 326 IAC 2-7-12 or a source modification approval if the provisions of 326 IAC 2-7-10.5 were applicable.

F.2.6 Notifications for Site Modifications [326 IAC 2-1.1-12(c) to (f)]

- (a) The Permittee shall submit a notification for any modification that would have otherwise required a source modification approval if the provisions of 326 IAC 2-7-10.5 were applicable, to the address listed in Section C, Condition C.19 – General Reporting Requirements, at least ten (10) days before implementing the modification.
- (b) The notification shall include the following information:
- (1) The company name and address and source and permit identification numbers;
 - (2) A description of the physical or operational change, including an estimate of the potential to emit of the emissions associated with the change;
 - (3) An identification of the emission unit or units being changed on the layout diagram of the source;
 - (4) The schedule for constructing each physical change and implementing each operational change;
 - (5) Identification of any applicable requirements that are applicable to the physical or operational change and include any monitoring, record keeping, or reporting requirements;
 - (6) A statement for all regulated pollutants, except the pollutant for which the emissions limit has been established, that demonstrates that the physical or operational change will not trigger any federal or state permitting requirement for any regulated pollutant; and
 - (7) A statement that the physical or operational change will not result in emissions greater than the emission limits.
- (c) This notification does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Other Flexible Permit Requirements

F.2.7 Valid Period for Best Available Control Technology [326 IAC 2-2-3(4)]

The modifications that occur under this permit qualify as a single, ongoing phase of construction and modification to Clinton Laboratories. The BACT requirements established in Sections D.2, D.3, and D.4 shall remain valid over the entire period of this permit. If the time between consecutive modifications exceeds 18 months, the Permittee shall demonstrate that the initial BACT determination incorporated into the permit is still valid or propose new BACT requirements. Upon expiration of this permit, Major New Source Review (NSR) requirements (Prevention of Significant Deterioration and Nonattainment NSR) shall apply.

F.2.8 NSPS and NESHAP Pre-Construction Notification and Reviews

The provisions of this permit do not relieve the Permittee of the notification and pre-construction approval requirements found in 40 CFR 60.7, 40 CFR 61.07, 40 CFR 61.08, and 40 CFR 63.5. If the Permittee constructs, reconstructs, or modifies an affected facility in a manner that requires notification or pre-construction approval under 40 CFR 60.7, 40 CFR 61.07, 40 CFR 61.08, or 40 CFR 63.5, the Permittee shall comply with those requirements.

SECTION G PLANTWIDE APPLICABILITY LIMITATION REQUIREMENTS

Emissions Unit Description:

The entire plant site is subject to the plantwide applicability limitation (PAL) requirements described in this G Section

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

Source Wide Emission Limits [326 IAC 2-2.4-7(1)]

G.1.1 Emission limits [326 IAC 2-2.4-7(1)]

- (a) Nitrogen oxides (NO_x) emissions from the entire source shall not exceed 776 tons per 12 consecutive month period with compliance determined at the end of each month. This provision does not supersede any other NO_x emission limits contained in this permit.
- (b) Sulfur dioxide (SO₂) emissions from the entire source shall not exceed 2321 tons per 12 consecutive month period with compliance determined at the end of each month. This provision does not supersede any other SO₂ emission limits contained in this permit.

General PAL requirements [326 IAC 2-2.4-1]

G.1.2 Major New Source Review Applicability [326 IAC 2-2.4-1(c)]

Any physical change in or change in the method of operation of this source is not a major modification for NO_x or SO₂, and is not subject to the review requirements of 326 IAC 2-2 provided actual emissions of NO_x and SO₂ from the entire source do not exceed the emission limits in Condition G.1.1 of this permit. This provision does not supersede or affect the Flexible Permit requirements in Section F of this permit.

G.1.3 General PAL requirements [326 IAC 2-2.4-7, 326 IAC 2-2.4-8, 326 IAC 2-2.4-9, 326 IAC 2-2.4-10, 326 IAC 2-2.4-11, 326 IAC 2-2.4-15]

- (a) The requirements of this section G become effective on the issuance date of the significant permit modification containing the PAL requirements, and expire ten years after the issuance date of the significant permit modification containing the PAL requirements.
- (b) If the permittee applies to renew this PAL at least six months prior to expiration of the PAL, but no earlier than eighteen months prior to the expiration of the PAL, then notwithstanding the expiration date in subsection G.1.3(a), the PAL shall continue to be effective until the revised permit with the renewed PAL is issued. The application must contain the elements described in 326 IAC 2-2.4-3 and 326 IAC 2-2.4-10.
- (c) Once this PAL expires, if not otherwise renewed, then the requirements of 326 IAC 2-2.4-9 are applicable.
- (d) The requirements for renewing this PAL are described in 326 IAC 2-2.4-10.
- (e) The requirements for increasing the emissions limits described in Condition G.1.1 are described in 326 IAC 2-2.4-11.
- (f) The requirements applicable to terminating or revoking this PAL are described in 326 IAC 2-2.4-15.

Testing and Monitoring Requirements [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

G.1.4 Nitrogen Oxides (NO_x) Emission Limit Determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of NO_x by employing the following techniques:

- (a) The Permittee shall calculate NO_x emissions from the C31 Boiler, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by an NO_x emission factor of 22 lb NO_x/ton of coal burned.
- (b) The Permittee shall calculate NO_x emissions from burning natural gas in C21 Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NO_x emission factor of 100 lb NO_x/million cubic feet of natural gas.
- (c) The Permittee shall calculate NO_x emissions from burning natural gas in C21 Boiler 4 and the C31 Boiler, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NO_x emission factor of 280 lb NO_x/million cubic feet of natural gas.
- (d) The Permittee shall determine NO_x emissions from the diesel engines, in tons, each calendar month by multiplying the actual hours of operation per calendar month for each diesel engine by emission factors listed in the table below.

| Engine | NO _x emission factor [lb/hr] |
|----------------------------|--|
| C24 Fire Pump 1 | 9.48 |
| C24 Fire Pump 2 | 9.48 |
| C44 Emergency Generator | 17.60 |
| C55 Emergency Generator | 5.73 |
| C79 Back up pump/generator | 15.55 |

- (e) When determining actual annual emissions of NO_x, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions to the extent such emissions are greater than the emission factors expressed in (a) through (d) above.

G.1.5 Sulfur dioxides (SO₂) emission limit determination [326 IAC 2-2.4-7(6) & (7)][326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of SO₂ by employing the following techniques:

- (a) The Permittee shall calculate SO₂ emissions from the C31 Boiler, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by an SO₂ emission factor of 0.38*S lb SO₂/ton of coal burned, where S = the percent sulfur content of the coal as determined by Condition D.1.6.
- (b) The Permittee shall calculate SO₂ emissions from burning natural gas in the C31 Boiler and C21 Boilers 1, 2, 3 and 4, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an SO₂ emission factor of 0.6 lb SO₂/million cubic feet of natural gas burned.
- (c) The Permittee shall determine SO₂ emissions from diesel engines, in tons, each calendar month, the Permittee shall calculate SO₂ emissions from the diesel engines by multiplying the actual hours of operation per calendar month for each diesel engine by emission factors listed in the table below.

| Engine | SO2 emission factor [lb/hr] |
|----------------------------|--------------------------------|
| C24 Fire Pump 1 | 0.62 |
| C24 Fire Pump 2 | 0.62 |
| C44 Emergency Generator | 1.16 |
| C55 Emergency Generator | 0.38 |
| C79 Back up pump/generator | 2.45 |

- (d) When determining actual annual emissions of SO₂, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions to the extent such emissions are greater than the emission factors expressed in (a) through (c) above.

G.1.6 Validation and Revalidation of emissions determination methods [326 IAC 2-2.4-12(i)]

- (a) The Permittee shall revalidate the emissions determination methods described in Conditions G.1.4 and G.1.5 through performance testing or other scientifically valid means approved by the department no later than five years after the effective date of the PAL provisions.
- (b) The Permittee shall conduct validation testing on the NO_x emission factor for the C31 boiler no later than 6 months after the issuance of the significant permit modification establishing the PAL requirements. If the validation testing shows an emission factor that is greater than the factor described in Condition G.1.4(a), then Condition G.1.4(a) shall be revised to require the Permittee to use the emission factor that resulted from the validation testing.

Record keeping and reporting [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

G.1.7 Record keeping requirements [326 IAC 2-7-5(3)] [326 IAC 2-2.4-13]

- (a) The Permittee shall retain a copy of all records necessary to determine compliance with the requirements of this G Section, including a determination of each emissions unit's twelve (12) month rolling total emissions, for five years from the date of the record.
- (b) The Permittee shall retain a copy of the PAL permit application, any applications for revisions to the PAL, each annual compliance certification as required by Condition B.9 of this permit, and data relied on in the certification for the duration of the PAL plus five years.

G.1.8 Reporting requirements [326 IAC 2-7-5(3)] [326 IAC 2-2.4-14]

- (a) The Permittee shall submit a report, containing the information described below, to the address listed in Section C – General Reporting Requirements, within thirty (30) days after the end of the calendar quarter being reported. This report requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). The report shall include the following information:
- (1) The identification of the owner and operator of the facility and the permit number.
 - (2) Total emissions of NO_x and SO₂, in tons per rolling 12 month period for each month in the reporting period, as determined by Conditions G.1.4 and G.1.5.
 - (3) All data relied upon, including but not limited to, any quality assurance or quality control data, in determining emissions.
 - (4) A list of any emissions units modified or added to the major stationary source during the reporting period.

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

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Eli Lilly and Company - Clinton Laboratories
Source Address: 10500 South Road 63, Clinton, Indiana 47842
Part 70 Permit No.: T165-27283-00009

This form consists of 2 pages

Page 1 of 2

| |
|--|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), not later than four (4) daytime 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 not later than 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: |

| Quarter: | Year: | Actual Emission Estimates, tons | | | | | | | | |
|-------------------|-------|---------------------------------|--------------------|----------------|---------|--------------------|----------------|---------|--------------------|----------------|
| | | Month 1 | Previous 11 Months | 12-month Total | Month 2 | Previous 11 Months | 12-month Total | Month 3 | Previous 11 Months | 12-month total |
| | | SO ₂ | | | | | | | | |
| Site Total | | | | | | | | | | |
| PAL Limits | | | | | | | | | | |
| | | NO _x | | | | | | | | |
| | | SO ₂ | | | | | | | | |

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification that meets the requirements of 326 IAC 2-7-6(1) to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 PART 70 OPERATING PERMIT
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Eli Lilly and Company - Clinton Laboratories
 Source Address: 10500 South Road 63, Clinton, Indiana 47842
 Part 70 Permit No.: T165-27283-00009

Months: _____ to _____ Year: _____

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

Indiana Department of Environmental Management Office of Air Quality

Appendix A

| |
|--|
| Baseline Actual Emissions and Proposed PAL Limits |
|--|

Clinton Laboratories is a manufacturing center that produces animal health products through fermentation, active ingredient extraction, and formulation/packaging into the final product. The site also includes a variety of support operations such as solvent storage, solvent recovery, boilers, and generators.

The sources of NO_x and SO₂ emissions from these facilities are the combustion units: five boilers and five internal combustion engines used for emergency and backup purposes. None of the other production or support operations are believed to emit NO_x or SO₂.

| |
|-----------------------|
| Emission Units |
|-----------------------|

Pursuant to 326 IAC 2-2.4-3(1), Clinton Labs must list all emissions units at the source with a designation of whether the emission unit is small, significant, or major – based on the potential to emit of the emission unit. Small emission units are units with potential to emit less than PSD significant thresholds. For both NO_x and SO₂, this value is 40 tons per year. Therefore, any emission unit with potential to emit less than 40 tons per year of NO_x or SO₂ will be considered a small emission unit. Significant emission units are units with potential to emit equal to or greater than PSD significant thresholds, but less than 100 tons per year. For this application, emission units with potential to emit NO_x or SO₂ of at least 40 tons per year and less than 100 tons per year will be a significant emission unit. Major emission units are units with potential to emit equal to or greater than or equal to 100 tons per year. Emission unit designations appear in Appendix C of this Technical Support Document (TSD).

In addition, this provision requires identification of all applicable requirements that apply to each emission unit. Because the applicable requirements for a complex site such as Clinton Laboratories can be extensive, the table includes a reference to the relevant section of the site's Title V permit. In this instance, all the applicable requirements for the boilers and internal combustion engines are found in Section D.1 of the Clinton Laboratories Title V permit.

Only the emission units at the site with the potential to emit NO_x or SO₂ are listed in this application. There are numerous emission units at the site which do not have the capability of emitting NO_x or SO₂, and therefore, it would not add value to the application to list these units.

The table provided the required information:

Site Emission Units:

| Emission Unit ID | Description | Applicable requirements |
|------------------|--|-----------------------------------|
| C31 Boiler | 243 MMBtu/hr Coal boiler | See Section D.1 of Title V Permit |
| C21 Boiler 1 | 79.5 MMBtu/hr Natural gas boiler #1 | See Section D.1 of Title V Permit |
| C21 Boiler 2 | 79.5 MMBtu/hr Natural gas boiler #2 | See Section D.1 of Title V Permit |
| C21 Boiler 3 | 79.5 MMBtu/hr Natural gas boiler #3 | See Section D.1 of Title V Permit |
| C21 Boiler 4 | 140.6 MMBtu/hr Natural gas boiler #4 | See Section D.1 of Title V Permit |
| C24 DFP01 | 2.15 MMBtu/hr Diesel fire pump #1 | See Section D.1 of Title V Permit |
| C24 DFP02 | 2.15 MMBtu/hr Diesel fire pump #2 | See Section D.1 of Title V Permit |
| C44 GEN 01 | 3.99 MMBtu/hr Diesel emergency generator | See Section D.1 of Title V Permit |

| Emission Unit ID | Description | Applicable requirements |
|------------------|--|-----------------------------------|
| C55 GEN 01 | 1.3 MMBtu/hr Diesel emergency generator | See Section D.1 of Title V Permit |
| C79 GEN 01 | 4.86 MMBtu/hr Back-up Fire Pump diesel generator | See Section D.1 of Title V Permit |

Baseline Actual Emissions/Proposed PAL Limits

Under the PAL rules in 326 IAC 2-2.4-6, the PAL emission limit is equal to the sum of the baseline actual emissions rate for each PAL pollutant and an amount equal to the significant emission rate for the pollutant.

Baseline actual emissions are defined in 326 IAC 2-2-1(xx) as the average actual emissions from any 24 month period of the last 10 years. It includes downward adjustments for noncompliant emissions that may have occurred during the baseline period and for new applicable requirements that apply to emission units since the time of the baseline period.

The baseline actual emissions are expressed by the following equation:

$$\text{Baseline actual emissions} = \text{Average actual emissions from any 24 month period of last 10 years} \\ \text{[includes fugitive emissions, and SSM event emissions]} \\ - \text{any noncompliant emissions that occurred during the 24 month period} \\ - \text{adjustment for applicability of new requirements since baseline period}$$

The establishment of the PAL emission level, as described above, also includes adjustments from the general rule to address emission units that have been shutdown or added since the baseline period. For a PAL, the emission limit can be described with the following equation:

The PAL emission level is expressed by the following equation:

$$\text{PAL emission level} = \text{Baseline actual emissions [as adjusted]} \\ - \text{emissions from emission units that have been shut down since baseline period} \\ + \text{potential to emit of emissions units that have started up since baseline period} \\ + \text{significant emission increase [40 tpy for both NOx and SO}_2\text{]}$$

Proposed baseline period

For both NOx and SO₂ Clinton Labs proposes a baseline period of the 24 month period beginning October 1, 2006 and ending September 30, 2008.

Baseline actual emissions

As described, the starting point for the baseline actual emissions are the actual emissions of the PAL pollutants during the proposed baseline period. These emission levels are then adjusted downward to reflect any non-compliant emissions or the applicability of new emission limits or other requirements for the facilities.

IDEM is not aware of any non-compliant NOx or SO₂ emissions that occurred at the site during this period. Similarly, we do not believe the applicability of any emission control requirements would have affected the emissions of NOx or SO₂ from the units emitting those compounds. Therefore, no downward adjustments to baseline actual emissions are necessary.

Clinton Laboratories has not included any specific actual emission estimates that correspond to startup, shutdown, or malfunction [SSM] events with any of the emission units. None of the emission units are equipped with NO_x or SO₂ emission control systems, so there are no periods when emission control systems are not working properly. SO₂ emissions are dependent on fuel usage and fuel sulfur content, and would not be altered by an SSM event. NO_x emissions are typically at their higher when a combustion unit is operating in a normal state compared to startup, shutdown or malfunction periods. The emission estimates in this application were determined using fuel usage and emission factors, which would represent the highest emission rates for combustion units without add on emission control devices or other emission reducing features. Consequently, IDEM agrees with Clinton Labs that the accuracy of the actual NO_x or SO₂ emissions during the baseline period are not improved by trying to develop unique emission rates for SSM events.

C31 Coal-fired boiler and C21 Natural gas boilers

Baseline actual emissions for the C31 coal-fired boiler are based on the number of tons of coal actually burned in 2006, 2007, and 2008. NO_x emissions are based on an AP-42 emission factor of 22 lb NO_x/ton of coal burned. [AP-42 Table 1.1-3].

SO₂ emissions are based on the AP-42 emission factor of 38(S), where S=% sulfur of the coal [AP 42 Table 1.1-3] and the amount of coal burned during 2006, 2007, and 2008. Because coal sulfur content varies from month to month, actual SO₂ emissions for 2006, 2007, and 2008 were determined by using the sulfur content measured each month [in accordance with Title V permit condition D.1.6, 326 IAC 3-7, and 326 IAC 7-2] and the amount of coal burned in that particular month. This results in a more accurate estimate of SO₂ emissions for the boiler.

Please note that the sulfur concentrations in 2006 and 2007 contained in Clinton Laboratories' quarterly Title V compliance reports are in error. Those values were reported on a dry basis instead of a wet basis. In addition, the amount of coal burned in 2007 and 2008 were also reported in error due to some incorrect assumptions. The correct sulfur concentrations and coal burned for the C31 boiler are included in Table B-2. The discrepancies were reported in the Q1 2010 Quarterly Title V Comprehensive Report.

Baseline actual emissions for the C21 boilers are based on the amount of natural gas and fuel oil actually burned in 2007 and 2008. Clinton Labs used applicable AP-42 emission factors for natural gas and #2 fuel oil boilers [from AP-42 Table 1.3-1 for fuel oil and Tables 1.4-1 and 1.4-2 for natural gas] to determine actual emissions during the baseline period.

C31 and C21 boiler actual emissions October 2006 – September 2008

| | | | NOx emissions | | | SO2 emissions | | |
|-----------------------------------|--|--|---|---|---|---|---|---|
| Boiler # | Coal burned 10/2006 – 9/2007 [ton/yr] | Coal burned 10/2007 – 9/2008 [ton/yr] | AP-42 NOx emission factor [lb/ton coal] ^[1] | Actual 10/2006 – 9/2007 NOx emissions [tpy] | Actual 10/2007 – 9/2008 NOx emissions [tpy] | AP-42 SO2 Emission Factor [lb/ton coal] ^[2] | Actual 10/2006 – 9/2007 SO2 emissions [tpy] | Actual 10/2007 – 9/2008 SO2 emissions [tpy] |
| C31 coal boiler | 64,237.70 | 66,285.73 | 22 | 706.61 | 729.14 | 38S | 2282.37 | 2279.57 |
| Boiler # | Natural gas burned 10/2006 – 9/2007 [MMcf] | Natural gas burned 10/2007 – 9/2008 [MMcf] | AP-42 NOx emission factor [lb/MMcf] ^[3] | Actual 10/2006 – 9/2007 NOx emissions [tpy] | Actual 10/2007 – 9/2008 NOx emissions [tpy] | AP-42 SO2 emission factor [lb/MMcf] ^[4] | Actual 10/2006 – 9/2007 SO2 emissions [tpy] | Actual 10/2007 – 9/2008 SO2 emissions [tpy] |
| C21 Boiler 1 (natural gas) | 59.91 | 24.78 | 100 | 3.00 | 1.24 | 0.6 | 0.02 | 0.01 |
| C21 Boiler 2 (natural gas) | 23.60 | 20.57 | 100 | 1.18 | 1.03 | 0.6 | 0.01 | 0.01 |
| C21 Boiler 3 (natural gas) | 49.85 | 3.83 | 100 | 2.49 | 0.19 | 0.6 | 0.01 | 0.00 |
| C21 Boiler 4 (natural gas) | 100.63 | 64.38 | 280 | 14.09 | 9.01 | 0.6 | 0.03 | 0.02 |
| C31 Boiler (natural gas) | 4 | 2 | 280 | 0.57 | 0.29 | 0.6 | 0.00 | 0.00 |
| Boiler # | Fuel oil burned 10/2006 – 9/2007 [gal] | Fuel oil burned 10/2007 – 9/2008 [gal] | AP-42 NOx emission factor [lb/1000 gal] ^[5] | Actual 10/2006 – 9/2007 NOx emissions [tpy] | Actual 10/2007 – 9/2008 NOx emissions [tpy] | AP-42 SO2 emission factor [lb/1000 gal] ^[6] | Actual 10/2006 – 9/2007 SO2 emissions [tpy] | Actual 10/2007 – 9/2008 SO2 emissions [tpy] |
| C21 Boiler 1 (#2 fuel oil) | 748.60 | 2,817.50 | 20 | 0.01 | 0.03 | 6.2 | 0.00 | 0.01 |
| C21 Boiler 2 (#2 fuel oil) | 0.00 | 0.00 | 20 | 0.00 | 0.00 | 6.2 | 0.00 | 0.00 |
| C21 Boiler 3 (#2 fuel oil) | 301.30 | 5,121.93 | 20 | 0.00 | 0.05 | 6.2 | 0.00 | 0.02 |
| C21 Boiler 4 (#2 fuel oil) | 220.00 | 630.00 | 24 | 0.00 | 0.01 | 6.2 | 0.00 | 0.00 |
| Total boiler emissions | | | | 727.95 | 741.00 | | 2,282.44 | 2,279.64 |

[1] AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02

[2] AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02 based on average coal sulfur content of 1.87% and 1.81%)

[3] AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-1; SCC 1-02-006-02 for Boilers C21-1, C21-2, and C21-3 and SCC 1-02-006-01 for Boiler C21-4

[4] AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-2

Monthly SO2 emissions from C31 coal boiler 2007-2008

| | October 2006 – September 2007 | | | October 2007 – September 2008 | | |
|------------------------|---|--|---|--|---|---|
| Month | 2006/2007 Coal burned [¹ ton/month] | 2006/2007 Sulfur content [²] | 2006/2007 Actual SO2 emissions [³ tons] | 2007/2008 Coal burned [¹] [ton/month] | 2007/2008 Sulfur content [²] | 2007/2008 Actual SO2 emissions [³ tons] |
| October | 5029.47 | 2.09 | 199.72 | 6064.88 | 1.74 | 200.50 |
| November | 5830.23 | 1.74 | 192.75 | 6655.40 | 1.63 | 206.12 |
| December | 6327.28 | 1.79 | 215.19 | 6865.82 | 1.80 | 234.81 |
| January | 6376.40 | 1.76 | 213.23 | 7182.43 | 1.74 | 237.45 |
| February | 5900.17 | 1.75 | 196.18 | 6453.50 | 1.95 | 239.10 |
| March | 5800.43 | 1.76 | 193.97 | 6862.08 | 1.73 | 225.56 |
| April | 5650.54 | 2.03 | 217.94 | 5376.66 | 1.68 | 171.62 |
| May | 5374.15 | 2.03 | 207.28 | 4052.27 | 1.61 | 123.96 |
| June | 2515.80 | 2.16 | 103.25 | 3075.05 | 1.99 | 116.27 |
| July | 3153.84 | 1.74 | 104.27 | 4798.50 | 1.87 | 170.49 |
| August | 6839.89 | 1.89 | 245.62 | 4044.64 | 1.99 | 152.93 |
| September | 5439.48 | 1.74 | 179.83 | 4854.50 | 1.97 | 181.70 |
| Total/Avg/Total | 64,237.70 | 1.87 | 2282.37 | 66,285.73 | 1.81 | 2279.57 |

[1] The amount of coal burned during 2006, 2007, and 2008 per month reported above differ from the amounts reported in Clinton Laboratories quarterly compliance reports for those time periods. In 2010 Clinton Laboratories determined that it had been underestimating the amount of coal being burned, and the site revised its coal consumption values. This discrepancy was reported to IDEM in the Q1 2010 Comprehensive Title V Quarterly Report. The site's annual emission statements for 2007 and 2008 were revised to reflect the higher coal consumption, but specific Title V compliance reports were not revised. The values in the table above represent Clinton Laboratories best estimate of the amount of coal burned during the applicable months.

[2] The sulfur content values in the table above for 2008 come from the reported values in Clinton Laboratories quarterly Title V compliance reports, not the "average" sulfur content reported in the site annual emission statements. The values for 2006 and 2007, however, represent a correction to the Title V compliance data reported for 2006 and 2007. In the 2007 reports the sulfur content were reported incorrectly because the percent sulfur was reported on a dry basis instead of a wet basis. The values above represent sulfur content on a wet basis. This discrepancy was reported to IDEM in the Q1 2010 Comprehensive Title V Quarterly Report.

[3] Calculated using AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02. Emission factor = 38*coal sulfur content%

Diesel engines

In 2006, 2007, and 2008, the diesel engines were operated for 30 minutes each week [26 hours per year] for testing purposes and a few additional hours each year when the emergency generators were triggered due to power outages or low power levels from the outside electrical service provider. For purposes of determining baseline actual emissions, Clinton Labs is assuming each engine operated for 50 hours in both 2007 and 2008. This would be based on each engine operating for 26 testing hours per year and an additional 24 hours for emergency usage. Those emissions are summarized in Table B-3, which appears on the next page.

C9 Thermal Oxidizers TO3 and TO4; C70 RTOs

The C9 Thermal oxidizers and the C70 RTOs operated only a few months in 2006 and 2007 before they were permanently shut down that year. Actual emissions of NOx from all these units were measured using a NOx CEMS and air flow monitoring system. Actual emissions of SO2 from the C9 thermal oxidizers were based on mass balance estimates of the amount of sulfur found in the liquid wastes burned. Actual emissions of SO2 from the RTOs were determined to be less than 0.0 tons per year based on an emission factor that Clinton Labs used to demonstrate compliance with SO2 emission limits that were applicable to the facilities at the time. Clinton Labs reported the NOx and SO₂ actual emissions described in Table B-6 in its Title V Quarterly Comprehensive Reports. No emissions from these units occurred in 2008 since the units were shut down in 2007.

Thermal oxidizer and RTO actual emissions as reported in Q3 2007 Quarterly Title V Comprehensive Report.

| Emission unit | NOx (tons/yr) | SO ₂ (tons/yr) |
|----------------------|---------------|---------------------------|
| C9 Thermal oxidizers | 13.69 | 0.12 |
| C70 RTOs | 7.5 | 0.00 |

SUMMARY

The baseline emissions for the period October 1, 2006 to September 30, 2008 are listed in greater detail in the table below. This table includes emissions units that have since been taken out of service, and which are deducted from the proposed PAL limits later in this application.

Baseline actual emissions [October 2006 – September 2008]

| Emission Unit ID | Description | NOx | | SO2 | |
|----------------------------------|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | | 10/2006 – 9/2007 emissions [tons] | 10/2007 – 9/2008 emissions [tons] | 10/2006 – 9/2007 emissions [tons] | 10/2007 – 9/2008 emissions [tons] |
| C31 Boiler | 243 MMBtu/hr Coal boiler | 706.61 | 729.14 | 2282.37 | 2279.57 |
| C31 Boiler | 243 MMBTU/hr Igniter Gas | 0.57 | 0.29 | 0.00 | 0.00 |
| C21 Boiler 1 | 79.5 MMBtu/hr Natural gas oil boiler #1 | 3.00 | 1.25 | 0.02 | 0.02 |
| C21 Boiler 2 | 79.5 MMBtu/hr Natural gas oil boiler #2 | 1.18 | 1.03 | 0.01 | 0.01 |
| C21 Boiler 3 | 79.5 MMBtu/hr Natural gas oil boiler #3 | 2.49 | 0.19 | 0.02 | 0.02 |
| C21 Boiler 4 | 140.6 MMBtu/hr Natural gas oil boiler #4 | 14.09 | 9.01 | 0.03 | 0.02 |
| C24 DFP01 | 2.15 MMBtu/hr Diesel fire pump #1 | 0.24 | 0.24 | 0.02 | 0.02 |
| C24 DFP02 | 2.15 MMBtu/hr Diesel fire pump #2 | 0.24 | 0.24 | 0.02 | 0.02 |
| C44 GEN01 | 3.99 MMBtu/hr Diesel emergency generator | 0.44 | 0.44 | 0.03 | 0.03 |
| C55 GEN01 | 1.3 MMBtu/hr Diesel emergency generator | 0.14 | 0.14 | 0.01 | 0.01 |
| C79 GEN01 | 4.86 MMBtu/hr Back-up Fire Pump diesel generator | 0.39 | 0.39 | 0.06 | 0.06 |
| Thermal oxidizers TO3 and TO4 | Two thermal oxidizers for burning liquid waste [permanently shut down in 2007] | 13.69 | 0.00 | 0.12 | 0.00 |
| C70 RTOs 1 and 2 | Regenerative thermal oxidizers for burning process fumes [permanently shut down in 2007] | 7.5 | 0.00 | 0.00 | 0.00 |
| Total for site | | 750.59 | 742.45 | 2282.70 | 2279.78 |
| Baseline actual emissions | | 746.52 | | 2,281.24 | |

The Proposed PAL Level

The PAL level is equal to the baseline actual emissions with a downward adjustment for emission units that have been removed from service, and with upward adjustments for new emission units added since the baseline period and the Major NSR significant increase level.

Since the baseline period, Clinton Labs has not installed any new sources of NOx or SO2 emissions. The site permanently shut down the TO3/TO4 liquid waste incinerators and the C70 regenerative thermal oxidizers in 2006 and 2007, so the actual emissions from these operations will be deducted from the baseline.

The table below summarizes the proposed PAL level for Clinton Laboratories.

Proposed PAL level

| | NOx (tons/yr) | SO2 (tons/yr) |
|---|----------------|---------------|
| Baseline actual emissions | 746.52 | 2,281.24 |
| Deduction for emission units taken out of service [average annual emissions during baseline period (=21.19 divided by 2)] | | |
| C9 Liquid Waste Incinerators [TO3/4] | - 6.85 | - 0.06 |
| Regenerative Thermal Oxidizers | - 3.75 | 0.00 |
| Sum of deductions for shutdowns | - 10.60 | -0.06 |
| Increase for new emission units [Potential to emit] | | |
| No new units | 0 | 0 |
| Sum of potential to emit for new emission units | 0 | 0 |
| Major NSR significant emission increase | 40.00 | 40.00 |
| Proposed PAL level | 776 | 2321 |

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

Appendix C

Determination of PTE and Classification of Emission Units And Compliance Determination Requirements

Eli Lilly and Company, Clinton Laboratories [Clinton Labs] has submitted an application for a Title V Significant Permit Modification, pursuant to 326 IAC 2-7-12, in order to revise the permit to include provisions for Plant-Wide Applicability Limits [PAL] for nitrogen oxides [NO_x] and sulfur dioxide [SO₂]. This application includes the information required by 326 IAC 2-2.4-3.

The proposed PAL for Clinton Laboratories would establish PAL limits of 776 tons/year for NO_x and 2321 tons/year for SO₂. The basis for these values is explained in appendix A of the Technical Support Document (TSD)

The PAL limits apply to the entire plant site, which includes the following types of operations:

- (1) Fermentation of antibiotic ingredients
- (2) Recovery and separation of antibiotic active ingredients from fermentation broth
- (3) Formulation and packaging of antibiotic active ingredients into final product for sale
- (4) A coal-fired boiler
- (5) Four natural gas fired boilers
- (6) Fire pumps, emergency generators and a backup generator
- (7) Solvent storage and solvent recovery

This permit includes a listing of emission units at the site that emit NO_x or SO₂, and a description of whether the emissions units are small, significant, or major [based on the unit's potential to emit]. The application also includes calculations of the site's "baseline actual emissions", which forms the basis for the PAL limits. The permit also includes a description of the calculation procedures Clinton Labs will implement to convert monitoring data to monthly and 12 month rolling average emission rates. This information satisfies the requirements of 326 IAC 2-2.4-3.

Emission Units

Pursuant to 326 IAC 2-2.4-3(1), Clinton Labs must list all emissions units at the source with a designation of whether the emission unit is small, significant, or major – based on the potential to emit of the emission unit. Small emission units are units with potential to emit less than PSD significant thresholds. For both NO_x and SO₂, this value is 40 tons per year. Therefore, any emission unit with potential to emit less than 40 tons per year of NO_x or SO₂ will be considered a small emission unit. Significant emission units are units with potential to emit equal to or greater than PSD significant thresholds, but less than 100 tons per year. For this application, emission units with potential to emit NO_x or SO₂ of at least 40 tons per year and less than 100 tons per year will be a significant emission unit. Major emission units are units with potential to emit equal to or greater than or equal to 100 tons per year.

In addition, this provision requires identification of all applicable requirements that apply to each emission unit. Because the applicable requirements for a complex site such as Clinton Laboratories can be extensive, the table includes a reference to the relevant section of the site's Title V permit. In this instance, all the applicable requirements for the boilers and internal combustion engines are found in Section D.1 of the Clinton Laboratories Title V permit.

Only the emission units at the site with the potential to emit NO_x or SO₂ are listed in this application. There are numerous emission units at the site which do not have the capability of emitting NO_x or SO₂, and therefore, it would not add value to the application to list these units.

Potential to Emit Determinations

Coal-fired boiler C31

The heat input rating of the C31 coal fired boiler is 243 MMBtu/hr. For purposes of calculating NOx PTE, Clinton Labs used the AP-42 emission factors for dry bottom pulverized coal boilers burning bituminous coal. [AP-42 Section 1.1, Table 1.1-3] These emission factors result in the highest PTE value for NOx when operating at maximum capacity.

For SO₂, Clinton Labs based PTE on the 4.72 lb/MMBtu emission limit found in 326 IAC 7-4-8 and Title V permit condition D.1.2(a).

The C31 coal fired boiler does use small amounts of natural gas for ignition purposes. For PTE the coal emissions factor results in the highest emissions, therefore, natural gas was not used.

Coal-fired boiler PTE

| Boiler # | Heat input rating [MMBtu/hr] | Coal heat value [MMBtu/ton] | Max amount of coal burned [ton/hr] | AP-42 NOx emission factor [lb/ton coal] ^[1] | NOx PTE [ton/yr] | SO2 emission limit [lb/MMBtu] ^[2] | SO2 PTE [ton/yr] |
|-----------------|------------------------------|-----------------------------|------------------------------------|--|------------------|--|------------------|
| C31 coal boiler | 243 | 24 | 10.13 | 22 | 976.13 | 4.72 | 5023.68 |

[1] AP-42 Emission Factor CHP 1, Section 1, Table 1.1-3, SCC 1-02-002-02

[2] 326 IAC 7-4-8 and Title V permit Condition D.1.2(a)

Natural gas/oil fired boilers 1-4

The PTE for these boilers are based on operating the boilers at full capacity for 8760 hours per year. AP-42 emission factors found in Section 1.4 for natural gas were used. As mentioned previously in this application, the boilers no longer have the capability of burning fuel oil because the fuel oil storage tanks have been removed from the site.

Potential to emit for C21 Boilers #1, 2, 3, and 4

| Boiler # | Heat input rating [MMBtu/hr] | Fuel heat value [MMBtu/MMcf] | Max amount of fuel burned [MMcf/hr] | AP-42 NOx emission factor [lb/MMcf] ^[1] | NOx PTE [ton/yr] | AP-42 SO2 emission factor [lb/MMcf] ^[2] | SO2 PTE [ton/yr] |
|--------------|------------------------------|------------------------------|-------------------------------------|--|------------------|--|------------------|
| C21 Boiler 1 | 79.5 | 1000 | 0.08 | 100 | 35.04 | 0.6 | 0.21 |
| C21 Boiler 2 | 79.5 | 1000 | 0.08 | 100 | 35.04 | 0.6 | 0.21 |
| C21 Boiler 3 | 79.5 | 1000 | 0.08 | 100 | 35.04 | 0.6 | 0.21 |
| C21 Boiler 4 | 140.6 | 1000 | 0.14 | 280 | 171.70 | 0.6 | 0.37 |

Diesel engines

The PTE for diesel engines is based on AP-42 emission factors found in AP-42 Table 3.3-1 for engines smaller than 600 brake horsepower-hour and AP-42 Table 3.4-1 for the C79 Backup pump/generator [0.5% sulfur is assumed for the large engines]. Clinton Labs developed an hourly emission factor based on multiplying the capacity in MMBtu/hr by the AP-42 emission factors expressed in lb/MMBtu. For the fire pumps and emergency generators, PTE is based on 500 hours per year of operation, as specified by USEPA guidance.

Potential to emit for diesel engines

| Engine | Capacity [MMBtu/hr] | NOx emission factor [lb NOx/MMBtu] ^{[1][2]} | NOx emission factor [lb/hr] | NOx PTE [ton/yr] | SO2 emission factor [lb SO2/MMBtu] ^{[3][4]} | SO2 emission factor [lb/hr] | SO2 PTE [ton/yr] |
|----------------------------|---------------------|--|-----------------------------|------------------|--|-----------------------------|------------------|
| C24 Fire Pump 1 | 2.15 | 4.41 | 9.48 | 2.37 | 0.29 | 0.62 | 0.16 |
| C24 Fire Pump 2 | 2.15 | 4.41 | 9.48 | 2.37 | 0.29 | 0.62 | 0.16 |
| C44 Emergency Generator | 3.99 | 4.41 | 17.60 | 4.40 | 0.29 | 1.16 | 0.29 |
| C55 Emergency Generator | 1.30 | 4.41 | 5.73 | 1.43 | 0.29 | 0.38 | 0.10 |
| C79 Back up pump/generator | 4.86 | 3.20 | 15.55 | 3.89 | 0.505 | 2.45 | 0.61 |

Site Emissions Units and Status [Emission Units with NOx and SO2 PTE only]

| Emission Unit ID | Description | NOx PTE (tons/yr) | Status | SO2 PTE (tons/yr) | Status | Applicable requirements |
|------------------|--|-------------------|--------|-------------------|--------|-----------------------------------|
| C31 Boiler | 243 MMBtu/hr Coal boiler | 976.13 | Major | 5023.68 | Major | See Section D.1 of Title V Permit |
| C21 Boiler 1 | 79.5 MMBtu/hr Natural gas boiler #1 | 35.04 | Small | 0.21 | Small | See Section D.1 of Title V Permit |
| C21 Boiler 2 | 79.5 MMBtu/hr Natural gas boiler #2 | 35.04 | Small | 0.21 | Small | See Section D.1 of Title V Permit |
| C21 Boiler 3 | 79.5 MMBtu/hr Natural gas boiler #3 | 35.04 | Small | 0.21 | Small | See Section D.1 of Title V Permit |
| C21 Boiler 4 | 140.6 MMBtu/hr Natural gas boiler #4 | 171.70 | Major | 0.37 | Small | See Section D.1 of Title V Permit |
| C24 DFP01 | 2.15 MMBtu/hr Diesel fire pump #1 | 2.37 | Small | 0.16 | Small | See Section D.1 of Title V Permit |
| C24 DFP02 | 2.15 MMBtu/hr Diesel fire pump #2 | 2.73 | Small | 0.16 | Small | See Section D.1 of Title V Permit |
| C44 GEN 01 | 3.99 MMBtu/hr Diesel emergency generator | 4.40 | Small | 0.29 | Small | See Section D.1 of Title V Permit |
| C55 GEN 01 | 1.3 MMBtu/hr Diesel emergency generator | 1.43 | Small | 0.10 | Small | See Section D.1 of Title V Permit |
| C79 GEN 01 | 4.86 MMBtu/hr Back-up Fire Pump diesel generator | 3.89 | Small | 0.61 | Small | See Section D.1 of Title V Permit |
| Total: | | 1267.41 | | 5026.00 | | |

Proposed Monitoring and emission calculation requirement

326 IAC 2-2.4-12 establishes the monitoring requirements for determining compliance with PAL emission limits. These provisions authorize four types of techniques for determining actual emissions:

1. Mass balance calculations for activities using coatings or solvents
2. Continuous emissions monitoring systems [CEMS]
3. Continuous parametric monitoring systems [CPMS] or parametric monitoring systems [PEMS]
4. Emission factors

The rules also authorize the use of an alternative monitoring system if it is approved by IDEM [presumably in the PAL permit].

Clinton Labs proposes to utilize fuel consumption monitoring/recordkeeping and hours of operation records combined with emissions factors as the basis for demonstrating compliance with the PAL emission limits. Monthly values would be used to determine the rolling 12-month emission rates for comparison to the PAL limits.

Clinton Labs proposes that none of the emissions factors that will be used in the compliance determination need adjustment to address uncertainty or other limitations of the emission factor [326 IAC 2-2.4-12(f)(1)]. IDEM has made a determination, pursuant to 326 IAC 2-2.4-12(f)(3), that validation of emissions factors for significant and major emission units within six months after the issuance of the PAL permit may not be required, except for NO_x emissions from the C31 boiler. The basis for these requests are described in greater detail below.

Coal-Fired Boiler

Clinton Labs proposes to use coal consumption information and AP-42 emission factors to determine NO_x and SO₂ emissions from the C31 coal-fired boiler.

For SO₂ emissions, Clinton Labs will use the AP-42 emission factor of 38 times the % sulfur content [38(S)] lb SO₂/per ton coal burned [AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02]. Clinton Labs already collects and analyzes coal samples for purposes of determining coal-sulfur content for compliance with 326 IAC 7 requirements. The site collects twice-daily samples of coal to create a monthly composite sample that is analyzed for sulfur content. The amount of coal burned in a month is also determined on a monthly basis. These coal sampling and usage requirements are already embodied in Section D.1 of the Title V permit.

The SO₂ emission factor does not need to be adjusted for uncertainty or other limitations. It is based on the conservative assumption that 97.5% of the sulfur in the coal converts to SO₂. The emission factor is widely accepted as accurate. It has an AP-42 rating of "A" and is equal to the highest emission factor for coal-fired boilers in general.

IDEM has determined that it is not necessary to conduct validation testing to develop site-specific SO₂ emission factors, pursuant to 326 IAC 2-2.4-12(f)(3). As described above, the emission factor is high quality, conservative and may overestimate emissions.

For NO_x, Clinton Labs proposes also to use the AP-42 emission factor for pulverized coal, dry bottom, bituminous coal-fired boilers found in AP-42 Table 1.1-3. This is an emission factor of 22 lb NO_x/ton of coal burned. Clinton Labs proposes to track the amount of coal burned and to apply this emission factor to determine NO_x emissions from the coal fired boilers.

Because this emission factor is an A rated emission factor, Clinton Labs proposes that these emission factors do not need adjustment for uncertainty. Pursuant to 326 IAC 2-2.4-12(f)(3), Clinton Labs will conduct validation testing for the NO_x emissions from this boiler to determine whether a site-specific emission factor should be used in lieu of the AP-42 emission factor.

C21 Natural gas Boiler

Clinton Labs proposes to use natural gas consumption and AP-42 emission factors to determine SO₂ and NO_x emissions from the four C21 natural gas boilers. As indicated earlier in this application, the boilers now burn only natural gas, as the fuel oil storage tanks associated with the boilers were removed.

The NO_x emissions from the C21 boilers will be determined using natural gas consumption measurements and AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-1; SCC 1-02-006-02 for Boilers C21-1, C21-2, and C21-3 [100 lb NO_x MMcf natural gas burned] and SCC 1-02-006-01 for Boiler C21-4 [280 lb NO_x/MMcf natural gas burned]. The emission factors are different for Boilers 1, 2, and 3 compared to Boiler 4 because of the difference in heat input capacity of the boilers.

Clinton Labs will measure the amount of natural gas burned in each of the boilers each month and apply those fuel consumption rates to the emission factors to determine actual emissions.

These NOx emission factors do not need to be adjusted for uncertainty or other limitations. The NOx natural gas emission factor for Boiler #4 has an “A” rating and is the highest of all the NOx emission factors for natural gas boilers. The NOx emission factor for Boilers #1-3 has a “B” rating, but Clinton Labs does not believe an adjustment is needed because actual natural gas consumption in these three boilers is low, and thus actual NOx emissions are low [less than 10 tons per year from the three boilers combined]

IDEM has determined that it is not necessary to conduct validation testing to develop site-specific NOx emission factors for Boiler #4. [Boilers #1, 2, and 3 are classified as “Small” emission units under the PAL, and therefore, no emission factor validation is required under 326 IAC 2-2.4-12(f)(3).] As described above, the natural gas emission factor has an “A” rating and is the highest natural gas emission factor that could be used. In addition, actual NOx emissions from Boiler #4 have historically been around 10 tons/year.

For SO₂ emissions, Clinton Labs will use the AP-42 emission factor of 0.6 lb SO₂/per million cubic feet of gas burned [AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-2]. Clinton Labs will measure the amount of natural gas burned in each of the boilers each month and apply those fuel consumption rates to the emission factors to determine actual SO₂ emissions.

This SO₂ emission factor does not need to be adjusted for uncertainty or other limitations. The SO₂ natural gas emission factor has an “A” rating and reflects the low amount of sulfur in natural gas.

Because all four of the C21 Boilers are classified as “Small” emission units for SO₂ under the PAL, emission factor validation is not required under 326 IAC 2-2.4-12(f)(3).]

Diesel engines [Emergency generators and fire pumps]

Clinton Labs proposes to determine actual emissions from the diesel engines by tracking actual hours of operation for each engine and multiplying the hours of operation by an hourly emission rate derived from AP-42 emission factors [assuming the unit operates at full capacity during those hours]. Clinton Labs will use hourly emission factors [lb/hr] developed by multiplying the AP-42 emission factors [expressed in lb of emissions/MMBtu] by the engine capacity [expressed in MMBtu/hr]. The emission factors are from AP-42 Table 3.3-1 for the C24, C44, and C55 engines, and AP Table 3.4-1 for the C79 engine.

Those emission factors are summarized in the table below.

Table 5: Emission factors used to determine actual emissions under the PAL for diesel engines

| Engine | Capacity [MMBtu/hr] | AP-42NOx emission factor [lb NOx/MMBtu] ^{[1][2]} | NOx emission factor [lb/hr] | AP-42 SO ₂ emission factor [lb SO ₂ /MMBtu] ^{[3][4]} | SO ₂ emission factor [lb/hr] |
|----------------------------|---------------------|---|-----------------------------|---|---|
| C24 Fire Pump 1 | 2.15 | 4.41 | 9.48 | 0.29 | 0.62 |
| C24 Fire Pump 2 | 2.15 | 4.41 | 9.48 | 0.29 | 0.62 |
| C44 Emergency Generator | 3.99 | 4.41 | 17.60 | 0.29 | 1.16 |
| C55 Emergency Generator | 1.30 | 4.41 | 5.73 | 0.29 | 0.38 |
| C79 Back up pump/generator | 4.86 | 3.20 | 15.55 | 0.505 ^[5] | 2.45 |

These emission factors do not need to be adjusted for uncertainty or other limitations. The actual NOx and SO₂ emissions from these units in recent years have been very low [approximately 1 ton NOx/year and a small fraction of a ton SO₂/year. Any adjustments to the emission factor would not have a material impact on emissions reported under the PAL.

All of the engines are classified as a “Small” emission units under the PAL, and therefore, no emission factor validation testing is required under 326 IAC 2-2.4-12(f)(3).

Proposed monitoring and emission determination requirements for all emission units under the PAL

| Emission unit | NOx emissions determination method | SO ₂ emissions determination method |
|--|---|---|
| C31 Coal boiler | <ul style="list-style-type: none"> • Determine amount of coal burned • Apply AP-42 emission factor of 22 lb NOx/ton coal burned • Apply an emission factor of 280 lb NOx/MMcf natural gas burned | <ul style="list-style-type: none"> • Collect coal sample 2x daily • Monthly sulfur analysis of composite coal sample • Determine amount of coal burned • Apply AP-42 emission factor of 38x(%S) lb SO₂/ton coal burned. • Track amount of natural gas burned. |
| C21 Boilers 1, 2, and 3 | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 100 lb NOx/MMcf natural gas burned | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 0.6 lb SO₂/MMcf natural gas burned |
| C21 Boiler 4 | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 280 lb NOx/MMcf natural gas burned | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 0.6 lb SO₂/MMcf natural gas burned |
| C24 DFP01 – diesel fire pump | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor of 9.48 lb NOx/hour of engine operation | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor 0.62 lb SO₂/hour of engine operation |
| C24 DFP02 – diesel fire pump | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor of 9.48 lb NOx/hour of engine operation | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor 0.62 lb SO₂/hour of engine operation |
| C44 GEN01 – diesel emergency generator | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor of 17.60 lb NOx/hour of engine operation | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor 1.16 lb SO₂/hour of engine operation |
| C55 GEN01 – diesel emergency generator | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor of 5.73 lb NOx/hour of engine operation | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor 0.38 lb SO₂/hour of engine operation |
| C79 GEN01 – backup fire pump and generator | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor of 15.55 lb NOx/hour of engine operation | <ul style="list-style-type: none"> • Track hours of engine operation • Apply an emission factor 2.45 lb SO₂/hour of engine operation |

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

Technical Support Document (TSD) for Plantwide Applicability Limitations
(PAL) Permit
And
for a Part 70 Significant Permit Modification

Source Description and Location

| | |
|--------------------------------------|---|
| Source Name: | Eli Lilly and Company - Clinton Laboratories |
| Source Location: | 10500 South State Road 63, Clinton, IN 47842 |
| County: | Vermillion |
| SIC Code: | 2833, 2834, 2879 |
| Operation Permit No.: | T 165-27283-00009 |
| Operation Permit Issuance Date: | October 16, 2009 |
| Significant Permit Modification No.: | 165-30354-00009 |
| Permit Reviewer: | Josiah Balogun |

Existing Approvals

The source was issued Part 70 Operating Permit No. 165-27283-00009 on October 16, 2009. The source has not received any other approval.

County Attainment Status

The source is located in Vermillion County.

| Pollutant | Designation |
|------------------|--|
| SO ₂ | Better than national standards. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| O ₃ | Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹ |
| PM ₁₀ | Attainment effective October 27, 1997, for the part of Clinton Township that includes sections 15, 16, 21, 22, 27, 28, 33, and 34. Unclassifiable effective November 15, 1990, for the remainder of Vermillion County. |
| NO ₂ | Cannot be classified or better than national standards. |
| Pb | Not designated. |

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Vermillion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
Vermillion County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**
Vermillion County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a pharmaceutical operation, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Source Status

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

| Pollutant | Emissions (ton/yr) |
|--------------------|---------------------------|
| PM | > 100 |
| PM ₁₀ | > 100 |
| SO ₂ | > 100 |
| VOC | > 100 |
| CO | > 100 |
| NO _x | > 100 |
| Single HAPs | > 10 |
| Total HAPs | > 25 |

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) These emissions are based upon Part 70 operating Permit No. 165-27283-00009, issued on October 16, 2009.

This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2009 OAQ emission data.

| Pollutant | Actual Emissions (tons/year) |
|-------------------|------------------------------|
| PM ₁₀ | 66 |
| PM _{2.5} | 23 |
| SO ₂ | 1,211 |
| VOC | 887 |
| CO | 23 |
| NO _x | 661 |
| Ammonia | 1 |
| Lead | 0.02 |

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application - Plantwide Applicability Limitations (PAL), submitted by Eli Lilly and Company - Clinton Laboratories on May 16, 2011, relating to a revision in the permit to include provisions for Plant-Wide Applicability Limits (PAL) for nitrogen oxides (NO_x) and sulfur dioxide (SO₂).

Once issued, the PAL permit provisions will enable Clinton Labs to install new equipment, expand existing operations, add new operations, and modify its processes without the changes being subject to Major New Source Review [NSR] requirements in 326 IAC 2-2. Clinton Labs intends to establish the PAL provisions independent of the existing permit conditions that provide flexibility to the Narasin production operations, which establish flexible permitting provisions for VOC emissions for those operations.

The PAL NO_x and SO₂ limits apply to the entire plant site, which includes the following types of operations:

- (1) Fermentation of antibiotic ingredients
- (2) Recovery and separation of antibiotic active ingredients from fermentation broth
- (3) Formulation and packaging of antibiotic active ingredients into final product for sale
- (4) A coal-fired boiler
- (5) Four natural gas fired boilers
- (6) Fire pumps, emergency generators and a backup generator
- (7) Solvent storage and solvent recovery

Enforcement Issues

There are no pending enforcement actions.

Emission Calculations

See Appendix A of this document for the detailed Baseline Actual Emission calculations.

See Appendix B of this document for the detailed PTE and Classification of Emission Units calculations.

Baseline Actual Emissions

Baseline actual emissions are defined in 326 IAC 2-2-1(xx) as the average actual emissions from any 24 month period of the last 10 years. For both NO₂ and SO₂ Lilly has proposed a baseline period of the 24 month period beginning October 1, 2006 and ending September 30, 2008. The Baseline actual emission and the PAL emission limits have been outlined in appendix A.

Permit Level Determination – PSD

This modification does not cause any emission increases. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

Federal Rule Applicability Determination

The following federal rules are applicable to the source:

326 IAC 2-2.4 and 40 CFR 51.166

- (a) This rule establishes the requirements for obtaining actuals plantwide applicability limitations (PAL) for nitrogen oxides and sulfur dioxide. A source that is subject to P.L. 231-2003, Section 6 shall comply with the requirements of 326 IAC 2-2.6. Eli Lilly and Company does not belong to one of the SIC codes listed in the 326 IAC 2-2.6 (Federal Requirements for Sources Subject to PL 231-2003, Endangered Industries), therefore, Eli Lilly and Company is not subject to 326 IAC 2-2.6.
- (b) If Lilly maintains its total source-wide nitrogen oxides and sulfur dioxide emissions below the PAL levels, meets the requirements in this rule, and complies with the PAL permit, then any physical change in or change in the method of operation of the source:
 - (1) is not a major modification for the PAL permit;
 - (2) does not have to be approved through 326 IAC 2-2; and
 - (3) is not subject to 2-2-8(a)(3).
- (c) Except as provided under 326 IAC 2-2.4(b)(3), Lilly shall continue to comply with all applicable federal or state requirements, emissions limitations, and work practice requirements that were established prior to the effective date of the PAL.

NSPS:

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) triggered by this proposed permit modification.

NESHAP:

- (a) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) triggered by this proposed permit modification.

CAM (40 CFR 64 and 326 IAC 3-8)

(a) Pursuant to 40 CFR 64.2 and 326 IAC 3-8, Compliance Assurance Monitoring (CAM) is applicable to emission units that involve a pollutant-specific emission unit and meet the following criteria:

- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved [for SO₂ and NO_x -100 tons/year];
- (2) is subject to an emission limitation or standard for that pollutant; and
- (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

IDEM has determined that no Compliance Assurance Monitoring [CAM] requirements are applicable to the NO_x and SO₂ emitting emission units under this PAL none of the emission units have NO_x or SO₂ controls. Therefore, CAM is not applicable to these emission units.

| |
|---|
| State Rule Applicability Determination |
|---|

The following state rules are applicable to the source for this PAL permit:

326 IAC 2-2.4-7 (Contents of the PAL permit)

(a) The PAL permit must contain, at a minimum, the following information:

- (1) The PAL pollutant and the applicable source-wide emission limitation in tons per year.
- (2) The PAL permit effective date and the expiration date of the PAL.
- (3) Specification in the PAL permit that if the Permittee applies to renew a PAL before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the department.
- (4) A requirement that emission calculations for compliance purposes include emissions from startups, shutdowns, and malfunctions.
- (5) A requirement that, once the PAL expires, the major stationary source is subject to the requirements of 326 IAC 2-2.4-9.
- (6) The calculation procedures that the Permittee shall use to convert the monitoring system data to monthly emissions and annual emissions based on a twelve (12) month rolling total.
- (7) A requirement that the Permittee monitor all emissions units in accordance with 326 IAC 2-2.4-12.
- (8) A requirement to retain the records required under 326 IAC 2-2.4-13 on site. The records may be retained in an electronic format.
- (9) A requirement to submit the reports required under 326 IAC 2-2.4-14 by the required deadlines.
- (10) Any other requirements that IDEM deems necessary to implement and enforce the PAL.

326 IAC 2-2.4-8 (PAL effective period and reopening of the PAL permit)

The PAL effective period is ten (10) years.

326 IAC 2-2.4-9 (Expiration of a PAL)

- (a) If this PAL is not renewed in accordance with the procedures in 326 IAC 2-2.4-10 it shall expire at the end of the PAL effective period, and the requirements in this section shall apply.
- (b) Each emissions unit or each group of emissions units that existed under the PAL shall comply with an allowable emission limitation under a revised permit established.
- (c) Until IDEM issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, the Permittee shall continue to comply with a source-wide, multiunit emissions cap equivalent to the level of the PAL emission limitation.
- (d) Any physical change or change in the method of operation at the source will be subject to major NSR requirements if the change meets the definition of major modification in 326 IAC 2-2-1(ee).
- (e) The Permittee shall continue to comply with any state or federal applicable requirements that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established under 326 IAC 2-2-8(a)(3), but were eliminated by the PAL.

326 IAC 2-2.4-10 (Renewal of a PAL)

The Permittee shall submit a timely application to IDEM to request renewal of a PAL. A timely application is one that is submitted at least six (6) months prior to, but not earlier than eighteen (18) months from the date of PAL expiration. If the Permittee submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.

326 IAC 2-2.4-12 Monitoring requirements for PAL

- (a) The following general requirements apply:
 - (1) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determine plantwide emissions of the PAL pollutants in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by the system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.
 - (2) The PAL monitoring system must employ one (1) or more of the four (4) general monitoring approaches meeting the minimum requirements set forth in subsection (b) and must be approved by the department.
 - (3) Notwithstanding subdivision (2), an alternative monitoring approach may be employed:
 - (A) that meets subdivision (1); and
 - (B) if it is approved by the IDEM.
 - (4) Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.

- (b) The followings are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in subsections (c) through (i):
 - (1) Mass balance calculations for activities using solvents.
 - (2) CEMS.
 - (3) CPMS or PEMS.
 - (4) Emission factors.
- (c) The Permittee when using mass balance calculations to monitor PAL pollutant emissions from activities using solvents shall meet the following requirements:
 - (1) Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit.
 - (2) Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process.
 - (3) Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from the material, the Permittee must use the highest value of the range to calculate the PAL pollutant emissions unless the IDEM determines there is site-specific data or a site-specific monitoring program to support another content within the range.
- (d) The Permittee when using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
 - (1) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors development.
 - (2) The emissions unit shall operate within the designated range of use for the emission factor if applicable.
 - (3) If technically practicable, the Permittee that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within six (6) months of PAL permit issuance unless the IDEM determines that testing is not required.
- (e) The Permittee must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data unless another method for determining emissions during the periods is specified in the PAL permit.
- (f) All data used to establish the PAL pollutant must be revalidated through performance testing or other scientifically valid means approved by the IDEM. The testing must occur at least once every five (5) years after issuance of the PAL.

326 IAC 2-2.4-13 Record keeping requirements

- (a) The Permittee shall retain a copy of all records necessary to determine compliance with any requirement of this rule and of the PAL, including a determination of each emissions unit's twelve (12) month rolling total emissions, for five (5) years from the date of the record.

- (b) The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus five (5) years:
- (1) A copy of the PAL permit application and any applications for revisions to the PAL.
 - (2) Each annual certification of compliance pursuant to 40 CFR Part 70 and the data relied on in certifying the compliance.

326 IAC 2-2.4-14 Reporting and notification requirements

The Permittee shall submit semiannual monitoring reports and deviation reports to the IDEM in accordance with 326 IAC 2-7.

Compliance Determination and Monitoring Requirements

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

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

The compliance monitoring and emission determination requirements applicable to this PAL permit are summarized below:

| Emission Units | NOx emissions determination method | SO2 emissions determination method |
|-------------------------|---|---|
| C31 Coal boiler | <ul style="list-style-type: none"> • Determine amount of coal burned • Apply AP-42 emission factor of 22 lb NOx/ton coal burned • Apply an emission factor of 280 lb NOx/MMcf natural gas burned | <ul style="list-style-type: none"> • Collect coal sample 2x daily • Monthly sulfur analysis of composite coal sample • Determine amount of coal burned • Apply AP-42 emission factor of 38x(%S) lb SO₂/ton coal burned. • Track amount of natural gas burned. |
| C21 Boilers 1, 2, and 3 | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 100 lb NOx/MMcf natural gas burned | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 0.6 lb SO₂/MMcf natural gas burned |
| C21 Boiler 4 | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 280 lb NOx/MMcf natural gas burned | <ul style="list-style-type: none"> • Track amount of natural gas burned. • Apply an emission factor of 0.6 lb SO₂/MMcf natural gas burned |

| | | |
|--|--|--|
| C24 DFP01 – diesel fire pump | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor of 9.48 lb NOx/hour of engine operation | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor 0.62 lb SO2/hour of engine operation |
| C24 DFP02 – diesel fire pump | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor of 9.48 lb NOx/hour of engine operation | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor 0.62 lb SO2/hour of engine operation |
| C44 GEN01 – diesel emergency generator | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor of 17.60 lb NOx/hour of engine operation | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor 1.16 lb SO2/hour of engine operation |
| C55 GEN01 – diesel emergency generator | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor of 5.73 lb NOx/hour of engine operation | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor 0.38 lb SO2/hour of engine operation |
| C79 GEN01 – backup fire pump and generator | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor of 15.55 lb NOx/hour of engine operation | <ul style="list-style-type: none"> Track hours of engine operation Apply an emission factor 2.45 lb SO2/hour of engine operation |

These monitoring conditions are necessary to ensure compliance with the PAL Limits.

Pursuant to Title V Permit Operating Condition G.1.6 and 326 IAC 2-2.4-12(i), Clinton Laboratories is required to revalidate the emissions determination methods in the PAL permit through performance testing or other scientifically valid means no later than five years after the effective date of the PAL provisions.

Although the language in proposed permit condition G.1.6(a) and 326 IAC 2-2.4-12(i) are different, IDEM believes the condition G.1.6(a) more accurately reflects the intent of 326 IAC 2-2.4-12(i) than the actual language in 326 IAC 2-2.4-12(i). The permit language is based upon the preamble to the December 31, 2002 *Federal Register* that accompanied publication of the final USEPA PAL rules – the rules upon which IDEM’s PAL rules are based [87 FR 80186, December 31, 2002]. Page 80211 of the December 31, 2002 *Federal Register* preamble describes the purpose of the revalidation provisions that appear in the PAL monitoring rules:

In addition, you will need to revalidate the data and any correlation to demonstrate that your monitoring systems continue to accurately determine emissions from each unit subject to a PAL. This re-validation must occur at least once every 5 years for the life of the PAL. Data must be revalidated through a performance evaluation test or other scientifically valid means that is approved by the reviewing authority.

This quotation from the preamble shows that the purpose of the revalidation provisions is to demonstrate that the methods described in the permit to determine actual emissions comply with the PAL limits still represent an accurate means of assessing actual emissions. The language in Condition G.1.6 implements this purpose much more effectively than the rule language in 40 CFR 51.166(w)(12)(ix) and 326 2-2.4-12(i), which IDEM now believes is simply flawed drafting of rule language.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T165-27283-00009. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1: The boilers, identified as C21 BLR01, BLR02, BLR03 and BLR04 were originally capable of burning #2 fuel oil, but the fuel oil tanks have been removed from the site and these boilers now burn only natural gas. Therefore, all the conditions associated with the fuel oil have been deleted from the permit. Subsequent conditions have been re-numbered in the permit.

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

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

- (a) D.1 Utilities Operations: The utilities operations consist of one coal-fired boiler equipped with an ash handling system, four natural gas/~~fuel oil~~ boilers, and other miscellaneous support equipment. The boilers provide steam to process operations in animal health manufacturing. The detailed equipment list is located in Section D.1 of this permit.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Utilities Operations

(a) The following emissions units are subject to applicable requirements described in this D section.

| Bldg. | Unit ID* | Unit Description | Stack/Vent ID | Control Devices** | Capacity | Units |
|-------|----------|---|--------------------|-------------------|----------|------------|
| C31 | Ash Tank | Ash Tank for C31 Coal Fired Boiler | PVC31ASH TK TRNSFR | Baghouse** | 6,361 | Cubic Feet |
| C31 | BLR01 | Coal Fired Boiler | C31IDF130 | Baghouse** | 243 | MMBTU/hr |
| C21 | BLR01 | Natural Gas/ #2 Oil Fired Boiler | PVC21BLR1 | | 79.5 | MMBTU/hr |
| C21 | BLR02 | Natural Gas/ #2 Oil Fired Boiler | PVC21BLR2 | | 79.5 | MMBTU/hr |
| C21 | BLR03 | Natural Gas/ #2 Oil Fired Boiler | PVC21BLR3 | | 79.5 | MMBTU/hr |
| C21 | BLR04 | Natural Gas/ #2 Oil Fired Boiler | PVC21BLR4 | | 140.6 | MMBTU/hr |

* Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21).
 ** Control devices marked with a double asterisk are required to meet an applicable limitation.

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

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

D.1.7 ~~Fuel Oil Sampling and Analysis for SO₂~~ [326 IAC 7-2] [326 IAC 3-7] **[Reserved]**

The Permittee shall utilize one of the following methods for the natural gas/~~fuel oil~~-fired boilers when burning ~~fuel oil~~:

- ~~(a) Provide vendor analysis of quantity, heat content and sulfur content of fuel delivered, if accompanied by a certification; or~~
- ~~(b) Analyze the oil sample to determine the sulfur content of the oil via the procedures in 326 IAC 3-7-4.
 - ~~(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.~~~~
- ~~(c) Conduct a stack test for sulfur dioxide emissions from the boiler, using 40 CFR Part 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(d)].~~

~~D.1.11 Fuel Oil Characteristics and Consumption Records [Reserved]~~

~~The Permittee shall record the information described in items (a) through (e) below. The records shall be compiled on a calendar month basis.~~

- ~~(a) The total amount of fuel oil combusted (expressed in pounds) for each of the natural gas/fuel oil-fired boilers.~~
- ~~(b) The average sulfur content (expressed in percentage by weight) of the fuel oil combusted;~~
- ~~(c) The average heat content (expressed in Btu per pound) of the fuel oil combusted;~~
- ~~(d) The average sulfur dioxide emission rate (expressed in pounds per million Btu) for the natural gas/fuel oil-fired boilers (C21 BLR01, BLR02, BLR03 and BLR04) during periods of fuel oil combustion; and~~
- ~~(e) Vendor analysis of the quantity, heat content and sulfur content of the fuel delivered, including a supplier certification.~~

Change 2: A new G Section (Plant wide Applicability Limitation Requirements) has been added to the permit.

SECTION G PLANTWIDE APPLICABILITY LIMITATION REQUIREMENTS

Emissions Unit Description:

The entire plant site is subject to the plantwide applicability limitation (PAL) requirements described in this G Section

(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 2-2.4-7(1)]

Source Wide Emission Limits [326 IAC 2-2.4-7(1)]

G.1.1 Emission limits [326 IAC 2-2.4-7(1)]

- (a) **Nitrogen oxides (NO_x) emissions from the entire source shall not exceed 776 tons per 12 consecutive month period with compliance determined at the end of each month. This provision does not supersede any other NO_x emission limits contained in this permit.**
- (b) **Sulfur dioxide (SO₂) emissions from the entire source shall not exceed 2321 tons per 12 consecutive month period with compliance determined at the end of each month. This provision does not supersede any other SO₂ emission limits contained in this permit.**

General PAL requirements [326 IAC 2-2.4-1]

G.1.2 Major New Source Review Applicability [326 IAC 2-2.4-1(c)]

Any physical change in or change in the method of operation of this source is not a major modification for NO_x or SO₂, and is not subject to the review requirements of 326 IAC 2-2 provided actual emissions of NO_x and SO₂ from the entire source do not exceed the emission limits in Condition G.1.1 of this permit. This provision does not supersede or affect the Flexible Permit requirements in Section F of this permit.

G.1.3 General PAL requirements [326 IAC 2-2.4-7, 326 IAC 2-2.4-8, 326 IAC 2-2.4-9, 326 IAC 2-2.4-10, 326 IAC 2-2.4-11, 326 IAC 2-2.4-15]

-
- (a) **The requirements of this section G become effective on the issuance date of the significant permit modification containing the PAL requirements, and expire ten years after the issuance date of the significant permit modification containing the PAL requirements.**
 - (b) **If the permittee applies to renew this PAL at least six months prior to expiration of the PAL, but no earlier than eighteen months prior to the expiration of the PAL, then notwithstanding the expiration date in subsection G.1.3(a), the PAL shall continue to be effective until the revised permit with the renewed PAL is issued. The application must contain the elements described in 326 IAC 2-2.4-3 and 326 IAC 2-2.4-10.**
 - (c) **Once this PAL expires, if not otherwise renewed, then the requirements of 326 IAC 2-2.4-9 are applicable.**
 - (d) **The requirements for renewing this PAL are described in 326 IAC 2-2.4-10.**
 - (e) **The requirements for increasing the emissions limits described in Condition G.1.1 are described in 326 IAC 2-2.4-11.**
 - (f) **The requirements applicable to terminating or revoking this PAL are described in 326 IAC 2-2.4-15.**

Testing and Monitoring Requirements [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

G.1.4 Nitrogen Oxides (NO_x) Emission Limit Determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of NO_x by employing the following techniques:

- (a) The Permittee shall calculate NOx emissions from the C31 Boiler, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by an NOx emission factor of 22 lb NOx/ton of coal burned.
- (b) The Permittee shall calculate NOx emissions from burning natural gas in C21 Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NOx emission factor of 100 lb NOx/million cubic feet of natural gas.
- (c) The Permittee shall calculate NOx emissions from burning natural gas in C21 Boiler 4, and C31 Boiler, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NOx emission factor of 280 lb NOx/million cubic feet of natural gas.
- (d) The Permittee shall determine NOx emissions from the diesel engines, in tons, each calendar month by multiplying the actual hours of operation per calendar month for each diesel engine by emission factors listed in the table below.

| Engine | NOx emission factor [lb/hr] |
|----------------------------|--------------------------------|
| C24 Fire Pump 1 | 9.48 |
| C24 Fire Pump 2 | 9.48 |
| C44 Emergency Generator | 17.60 |
| C55 Emergency Generator | 5.73 |
| C79 Back up pump/generator | 15.55 |

- (e) When determining actual annual emissions of NOx, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions to the extent such emissions are greater than the emission factors expressed in (a) through (d) above.

G.1.5 Sulfur dioxides (SO₂) emission limit determination [326 IAC 2-2.4-7(6) & (7)][326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of SO₂ by employing the following techniques:

- (a) The Permittee shall calculate SO₂ emissions from the C31 Boiler, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by an SO₂ emission factor of 0.38*S lb SO₂/ton of coal burned, where S = the percent sulfur content of the coal as determined by Condition D.1.6.
- (b) The Permittee shall calculate SO₂ emissions from burning natural gas in the C31 Boiler and C21 Boilers 1, 2, 3 and 4, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an SO₂ emission factor of 0.6 lb SO₂/million cubic feet of natural gas burned.
- (c) The Permittee shall determine SO₂ emissions from diesel engines, in tons, each calendar month, the Permittee shall calculate SO₂ emissions from the diesel engines by multiplying the actual hours of operation per calendar month for each diesel engine by emission factors listed in the table below.

| Engine | SO2 emission factor [lb/hr] |
|-------------------------------|--------------------------------|
| C24 Fire Pump 1 | 0.62 |
| C24 Fire Pump 2 | 0.62 |
| C44 Emergency Generator | 1.16 |
| C55 Emergency Generator | 0.38 |
| C79 Back up pump/generator | 2.45 |

- (d) When determining actual annual emissions of SO₂, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions to the extent such emissions are greater than the emission factors expressed in (a) through (c) above.

G.1.6 Validation and Revalidation of emissions determination methods [326 IAC 2-2.4-12(i)]

- (a) The Permittee shall revalidate the emissions determination methods described in Conditions G.1.4 and G.1.5 through performance testing or other scientifically valid means approved by the department no later than five years after the effective date of the PAL provisions.
- (b) The Permittee shall conduct validation testing on the NO_x emission factor for the C31 boiler no later than 6 months after the issuance of the significant permit modification establishing the PAL requirements. If the validation testing shows an emission factor that is greater than the factor described in Condition G.1.4(a), then Condition G.1.4(a) shall be revised to require the Permittee to use the emission factor that resulted from the validation testing.

Record keeping and reporting [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

G.1.7 Record keeping requirements [326 IAC 2-7-5(3)] [326 IAC 2-2.4-13]

- (a) The Permittee shall retain a copy of all records necessary to determine compliance with the requirements of this G Section, including a determination of each emissions unit's twelve (12) month rolling total emissions, for five years from the date of the record.
- (b) The Permittee shall retain a copy of the PAL permit application, any applications for revisions to the PAL, each annual compliance certification as required by Condition B.9 of this permit, and data relied on in the certification for the duration of the PAL plus five years.

G.1.8 Reporting requirements [326 IAC 2-7-5(3)] [326 IAC 2-2.4-14]

- (a) The Permittee shall submit a report, containing the information described below, to the address listed in Section C – General Reporting Requirements, within thirty (30) days after the end of the calendar quarter being reported. This report requires the certification by the “responsible official” as defined by 326 IAC 2-7-1(34). The report shall include the following information:
- (1) The identification of the owner and operator of the facility and the permit number.
 - (2) Total emissions of NO_x and SO₂, in tons per rolling 12 month period for each month in the reporting period, as determined by Conditions G.1.4 and G.1.5.

- (3) All data relied upon, including but not limited to, any quality assurance or quality control data, in determining emissions.
- (4) A list of any emissions units modified or added to the major stationary source during the reporting period.

- (b) The procedures for reporting deviations from the requirements of this Section G, and the procedures for reporting emissions in excess of the limits described in Condition G.1.1 are described in Condition B.14. A report that describes emissions exceeding the PAL limits shall include the quantity of emissions emitted by the source. This term satisfies the requirements of 326 IAC 2-2.4-14(c).

- (c) The Permittee shall submit to the department the results of any revalidation test or method within three months of completion of the test or method. These results do not require responsible official certification.

Change 2: A quarterly Emission Limit Report has been added for the PAL NOx and SO2 limits in the permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

Section G.1 –Plantwide Applicability Limitations Requirements Quarterly Emission Limit Report

Source Name: Eli Lilly and Company - Clinton Laboratories
Source Address: 10500 South Road 63, Clinton, Indiana 47842
Part 70 Permit No.: T165-27283-00009
Facility: Source wide
Parameter: Plantwide Emission Limits for NOx, and SO₂
PAL Limit:

| Pollutant | (Tons/yr) |
|-----------------|-----------|
| NOx | 776 |
| SO ₂ | 2,321 |

The attached spreadsheet provides the monthly actual emissions for the PAL NOx and SO₂ limits. The information is used to determine compliance with the emission limits provided above. This emission summary report was:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification **that meets the requirements of 326 IAC 2-7-6(1)** to complete this report.

| Quarter: | Year: | Actual Emission Estimates, tons | | | | | | | | |
|----------|-------|---------------------------------|--------------------|----------------|---------|--------------------|----------------|---------|--------------------|----------------|
| | | Month 1 | Previous 11 Months | 12-month Total | Month 2 | Previous 11 Months | 12-month Total | Month 3 | Previous 11 Months | 12-month total |
| | | SO ₂ | | | | | | | | |
| | | Site Total | | | | | | | | |
| | | PAL Limits | | | | | | | | |
| | | NO _x | | | | | | | | |
| | | SO ₂ | | | | | | | | |

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification **that meets the requirements of 326 IAC 2-7-6(1)** to complete this report.

Other Changes

Upon further review IDEM, OAQ has made the following changes to the Title V permit No. 165-27283-00009. (deleted language appears as ~~strikeout~~ and the new language **bolded**):

Change 1: IDEM, OAQ has decided to remove all references to the source mailing address. IDEM, OAQ will continue to maintain records of the mailing address.

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

The Permittee owns and operates a stationary pharmaceutical manufacturing plant.

Source Address: 10500 South State Road 63, Clinton, Indiana 47842
Mailing Address: 10500 S SR 63, Clinton, IN 47842

Change No.1 The Quarterly Reports have been updated as follows:

EMERGENCY OCCURRENCE REPORT

...

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

...

Change No. 2 The Quarterly Reports have been updated as follows:

Part 70 Quarterly Report

Attach a signed certification **that meets the requirements of 326 IAC 2-7-6(1)** to complete this report.

Change No. 3 The Quarterly Deviation and Compliance Monitoring Report has been updated as follows:

PART 70 OPERATING PERMIT QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

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

...

Attach a signed certification **that meets the requirements of 326 IAC 2-7-6(1)** to complete this report.

| |
|--------------------------------------|
| Conclusion and Recommendation |
|--------------------------------------|

The operation of this proposed modification shall be subject to the conditions of the attached proposed Plantwide Applicability Limitations (PAL) and Part 70 Significant Permit Modification No 165-30354-0009. The staff recommends to the Commissioner that this Part 70 Significant Permit Modification be approved.

| |
|---------------------|
| IDEM Contact |
|---------------------|

- (a) Questions regarding this proposed permit can be directed to Josiah Balogun at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5257 or toll free at 1-800-451-6027 extension 4-5257.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Potential to emit - Boilers

| Boiler # | Heat input rating [MMBtu/hr] | Coal heat value MMBtu/ton]** | Max amount of coal burned [ton/hr] | AP-42 NOx emission factor [lb/ton coal] ^[1] | NOx PTE [ton/yr] | SO2 emission limit [lb/MMBtu] ^[2] | SO2 PTE [ton/yr] |
|----------------------------|------------------------------|------------------------------|-------------------------------------|--|------------------|--|------------------|
| C31 coal boiler | 243 | 24 | 10.13 | 22 | 976.13 | 4.72 | 5023.68 |
| Boiler # | Heat input rating [MMBtu/hr] | Fuel heat value [MMBtu/MMcf] | Max amount of fuel burned [MMcf/hr] | AP-42 NOx emission factor [lb/MMcf] ^[3] | NOx PTE [ton/yr] | AP-42 SO2 emission factor [lb/MMcf] ^[4] | SO2 PTE [ton/yr] |
| C21 Boiler 1 (natural gas) | 79.5 | 1000 | 0.08 | 100 | 35.04 | 0.60 | 0.21 |
| C21 Boiler 2 (natural gas) | 79.5 | 1000 | 0.08 | 100 | 35.04 | 0.60 | 0.21 |
| C21 Boiler 3 (natural gas) | 79.5 | 1000 | 0.08 | 100 | 35.04 | 0.60 | 0.21 |
| C21 Boiler 4 (natural gas) | 140.6 | 1000 | 0.14 | 280 | 171.70 | 0.60 | 0.37 |

[1] AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02

[2] 326 IAC 7-4-8 and Title V permit condition D.1.2(a)

[3] AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-1; SCC 1-02-006-02 for Boilers C21-1, C21-2, and C21-3 and SCC 1-02-006-01 for Boiler C21-4

[4] AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-2

** Between 2005 and now Eli Lilly monthly Coal BTU values have ranged from approximately 10,700 BTU/lb to 11,913 BTU/lb with an average of about 11,200 BTU/lb. Eli Lilly used 12,000BTU/lb as the maximum value.

Hence

$$12,000\text{BTU/lb} \times 2000\text{lb/ton} = 24,000,000 \text{ BTU/ton} = 24 \text{ MMBTU/ton}$$

Potential to Emit - Engines

| Engine | Capacity [MMBtu/hr] | NOx emission factor [lb NOx/MMBtu] ^{[1][2]} | NOx emission factor [lb/hr] | NOx PTE [ton/yr] | SO2 emission factor [lb SO2/MMBtu] ^{[3][4]} | SO2 emission factor [lb/hr] | SO2 PTE [ton/yr] |
|----------------------------|------------------------|---|--------------------------------------|---------------------|---|--------------------------------------|---------------------|
| C24 Fire Pump 1 | 2.15 | 4.41 | 9.48 | 2.37 | 0.29 | 0.62 | 0.16 |
| C24 Fire Pump 2 | 2.15 | 4.41 | 9.48 | 2.37 | 0.29 | 0.62 | 0.16 |
| C44 Emergency Generator | 3.99 | 4.41 | 17.60 | 4.40 | 0.29 | 1.16 | 0.29 |
| C55 Emergency Generator | 1.30 | 4.41 | 5.73 | 1.43 | 0.29 | 0.38 | 0.10 |
| C79 Back up pump/generator | 4.86 | 3.20 | 15.55 | 3.89 | 0.505 | 2.45 | 0.61 |

[1] NOx AP-42 Emission Factors 3.3 - Table 3.3-1; SCC 2-02-001-02 for all generators except C79.

[2] NOx AP-42 Emission Factors 3.4 - Table 3.4-1; SCC 2-02-004-01 for C79 generator.

[3] SO2 AP-42 Emission Factors 3.3 - Table 3.3-1; SCC 2-02-001-02 for all generators except C79.

[4] SO2 AP-42 Emission Factors 3.4 - Table 3.4-1; SCC 2-02-004-01 for C79 generator. Sulfur content conservatively assumed to be 0.5%

All PTE emissions based on 500 hours per year of operation multiplied by the hourly emission factor

| | | | NOx emissions | | | SO2 emissions | | | | |
|-------------------------------|-------------------------------------|-------------------------------------|--|--------------------------------------|--------------------------------------|--|--------------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|
| Boiler # | Coal burned 2007 [ton/yr] | Coal burned 2008 [ton/yr] | AP-42 NOx emission factor [lb/ton coal] ^[1] | Actual 2006/2007 NOx emissions [tpy] | Actual 2007/2008 NOx emissions [tpy] | AP-42 SO2 Emission Factor [lb/ton coal] ^[2] | Actual 2006/2007 SO2 emissions [tpy] | Actual 2007/2008 SO2 emissions [tpy] | NOx Average (for PAL-01 NOx form) | SO2 Average (for PAL-01 SO2 form) |
| C31 coal boiler | 64,237.70 | 66,285.73 | 22 | 706.61 | 729.14 | 38S | 2282.37 | 2279.57 | 718.31 | 2280.97 |
| C31 Boiler Natural Gas | 4.11 | 2.08 | 280 | 0.57 | 0.29 | 0.6 | 0.00 | 0.00 | | |
| Boiler # | Natural gas burned 2006/2007 [MMcf] | Natural gas burned 2007/2008 [MMcf] | AP-42 NOx emission factor [lb/MMcf] ^[3] | Actual 2007 NOx emissions [tpy] | Actual 2008 NOx emissions [tpy] | AP-42 SO2 emission factor [lb/MMcf] ^[4] | Actual 2006/2007 SO2 emissions [tpy] | Actual 2007/2008 SO2 emissions [tpy] | | |
| C21 Boiler 1 (natural gas) | 59.91 | 25.02 | 100 | 3.00 | 1.25 | 0.6 | 0.02 | 0.01 | 2.15 | 0.02 |
| C21 Boiler 2 (natural gas) | 23.60 | 20.57 | 100 | 1.18 | 1.03 | 0.6 | 0.01 | 0.01 | 1.11 | 0.01 |
| C21 Boiler 3 (natural gas) | 49.85 | 3.83 | 100 | 2.49 | 0.19 | 0.6 | 0.01 | 0.00 | 1.37 | 0.02 |
| C21 Boiler 4 (natural gas) | 100.63 | 64.38 | 280 | 14.09 | 9.01 | 0.6 | 0.03 | 0.02 | 11.56 | 0.03 |
| Boiler # | Fuel oil burned 2006/2007 [gal] | Fuel oil burned 2007/2008 [gal] | AP-42 NOx emission factor [lb/1000 gal] ^[5] | Actual 2006/2007 NOx emissions [tpy] | Actual 2007/2008 NOx emissions [tpy] | AP-42 SO2 emission factor [lb/1000 gal] ^[6] | Actual 2006/2007 SO2 emissions [tpy] | Actual 2007/2008 SO2 emissions [tpy] | | |
| C21 Boiler 1 (#2 fuel oil) | 748.60 | 2817.50 | 20 | 0.01 | 0.03 | 6.2 | 0.00 | 0.01 | | |
| C21 Boiler 2 (#2 fuel oil) | 0.00 | 0.00 | 20 | 0.00 | 0.00 | 6.2 | 0.00 | 0.00 | | |
| C21 Boiler 3 (#2 fuel oil) | 301.30 | 5121.93 | 20 | 0.00 | 0.05 | 6.2 | 0.00 | 0.02 | | |
| C21 Boiler 4 (#2 fuel oil) | 220.00 | 630.00 | 24 | 0.00 | 0.01 | 6.2 | 0.00 | 0.00 | | |
| Total boiler emissions | | | | 727.95 | 741.00 | | 2,282.44 | 2,279.64 | | |

Average

734.48

2,281.04

[1] AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02

[2] AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02 based on average coal sulfur content of 1.84% for 2007 and 1.77% for 2008)

[3] AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-1; SCC 1-02-006-02 for Boilers C21-1, C21-2, and C21-3 and SCC 1-02-006-01 for Boiler C21-4

[4] AP-42 Emission Factor Chapter 1 Section 4, Table 1.4-2

[5] AP-42 Emission Factor Chapter 1 Section 3, Table 1.3-1; SCC 1-02-005-02 for Boilers C21-1, C21-2, and C21-3 and SCC 1-02-005-01 for Boiler C21-4

[6] AP-42 Emission Factor Chapter 1 Section 3, Table 1.3-1; SCC 1-02-005-02 for Boilers C21-1, C21-2, and C21-3 and SCC 1-02-005-01 for Boiler C21-4 with average sulfur content of 0.044%

| | 2006/2007 NOx | 2007/2008 NOx | | 2006/2007 SO2 | 2007/2008 SO2 | NOx Average | SO2 Average |
|--|---------------|---------------|--|---------------|---------------|-------------|-------------|
| C24 Fire Pump 1 | 0.24 | 0.24 | | 0.02 | 0.02 | 0.24 | 0.02 |
| C24 Fire Pump 2 | 0.24 | 0.24 | | 0.02 | 0.02 | 0.24 | 0.02 |
| C44 Emergency Generator | 0.44 | 0.44 | | 0.03 | 0.03 | 0.44 | 0.03 |
| C55 Emergency Generator | 0.14 | 0.14 | | 0.01 | 0.01 | 0.14 | 0.01 |
| C79 Back up pump/generator | 0.39 | 0.39 | | 0.06 | 0.06 | 0.39 | 0.06 |
| TO#3 | 13.69 | 0 | | 0.12 | 0.00 | 6.85 | 0.06 |
| RTOs | 7.50 | 0 | | 0.00 | 0.00 | 3.75 | 0.00 |
| Total Baseline | 750.59 | 742.45 | | 2,282.70 | 2,279.78 | | |
| Average Baseline | 746.52 | | | 2,281.24 | | | |
| Total Baseline | 750.59 | 742.45 | | 2,282.70 | 2,279.78 | | |
| Baseline Subtraction (TO3/RTO) | 21.19 | 0.00 | | 0.12 | 0.00 | | |
| Baseline after subtract | 729.40 | 742.45 | | 2,282.58 | 2,279.78 | | |
| Baseline PAL Average (after subtraction) | 735.93 | | | 2,281.18 | | | |
| plus 40 ton/yr | 40 | | | 40 | | | |
| PAL Limit | 775.93 | | | 2,321.18 | | | |

Actual SO2 Emissions - C31 Coal-fired Boiler

| Month | 2006 - 2007 | | | 2007 - 208 | | |
|------------------------|--|-------------------------------|--|--|-------------------------------|--|
| | Coal burned 2006/2007 ^[1] [ton/month] | Sulfur content ^[2] | Actual 2006/2007 SO2 emissions [tons] ^[3] | Coal burned 2007/2008 ^[1] [ton/month] | Sulfur content ^[2] | Actual 2007/2008 SO2 emissions [tons] ^[3] |
| October | 5029.47 | 2.09 | 199.72 | 6064.88 | 1.74 | 200.50 |
| November | 5830.23 | 1.74 | 192.75 | 6655.40 | 1.63 | 206.12 |
| December | 6327.28 | 1.79 | 215.19 | 6865.82 | 1.80 | 234.81 |
| January | 6376.40 | 1.76 | 213.23 | 7182.43 | 1.74 | 237.45 |
| February | 5900.17 | 1.75 | 196.18 | 6453.50 | 1.95 | 239.10 |
| March | 5800.43 | 1.76 | 193.97 | 6862.08 | 1.73 | 225.56 |
| April | 5650.54 | 2.03 | 217.94 | 5376.66 | 1.68 | 171.62 |
| May | 5374.15 | 2.03 | 207.28 | 4052.27 | 1.61 | 123.96 |
| June | 2515.80 | 2.16 | 103.25 | 3075.05 | 1.99 | 116.27 |
| July | 3153.84 | 1.74 | 104.27 | 4798.50 | 1.87 | 170.49 |
| August | 6839.89 | 1.89 | 245.62 | 4044.64 | 1.99 | 152.93 |
| September | 5439.48 | 1.74 | 179.83 | 4854.50 | 1.97 | 181.70 |
| Total/Avg/Total | 64,237.70 | 1.87 | 2282.37 | 66,285.73 | 1.81 | 2279.57 |

[1] The amount of coal burned during 2007 and 2008 per month reported above differ from the amounts reported in Clinton Laboratories quarterly compliance reports for those time periods. In 2010 Clinton Laboratories determined that it had been underestimating the amount of coal being burned, and the site revised its coal consumption values. This discrepancy was reported to IDEM in, 2010. The site's annual emission statements for 2007 and 2008 were revised to reflect the higher coal consumption, but Title V compliance reports were not revised. The values in the table above represent Clinton Laboratories best estimate of the amount of coal burned during the applicable months.

[2] The sulfur content values in the table above for 2008 come from the reported values in Clinton Laboratories quarterly Title V compliance reports, not the "average" sulfur content reported in the site annual emission statements. The values for 2007, however, represent a correction to the data reported for 2007. In the 2007 reports the sulfur content were reported incorrectly because the percent sulfur was reported on a dry basis instead of a wet basis. The values above represent sulfur content on a wet basis.

[3] Calculated using AP-42 Emission Factor Chapter 1, Section 1, Table 1.1-3, SCC 1-02-002-02. Emission factor = 38*coal sulfur content%

Actual Emissions - Engines

| Engine | Capacity [MMBtu/hr] | 2007 hours of operation | 2008 hours of operation | NOx emission factor [lb NOx/MMBtu] ^{[1][2]} | NOx emission factor [lb/hr] | 2007 NOx emissions [tpy] | 2008 NOx emissions [tpy] | SO2 emission factor [lb SO2/MMBtu] ^{[3][4]} | SO2 emission factor [lb/hr] | 2007 SO2 emissions [tpy] | 2008 SO2 emissions [tpy] |
|----------------------------|---------------------|-------------------------|-------------------------|--|-----------------------------|--------------------------|--------------------------|--|-----------------------------|--------------------------|--------------------------|
| C24 Fire Pump 1 | 2.15 | 50 | 50 | 4.41 | 9.48 | 0.24 | 0.24 | 0.29 | 0.62 | 0.02 | 0.02 |
| C24 Fire Pump 2 | 2.15 | 50 | 50 | 4.41 | 9.48 | 0.24 | 0.24 | 0.29 | 0.62 | 0.02 | 0.02 |
| C44 Emergency Generator | 3.99 | 50 | 50 | 4.41 | 17.60 | 0.44 | 0.44 | 0.29 | 1.16 | 0.03 | 0.03 |
| C55 Emergency Generator | 1.30 | 50 | 50 | 4.41 | 5.73 | 0.14 | 0.14 | 0.29 | 0.38 | 0.01 | 0.01 |
| C79 Back up pump/generator | 4.86 | 50 | 50 | 3.20 | 15.55 | 0.39 | 0.39 | 0.505 | 2.45 | 0.06 | 0.06 |
| Average | | | | | | 1.45 | 1.45 | | | 0.14 | 0.14 |

[1] NOx AP-42 Emission Factors 3.3 - Table 3.3-1; SCC 2-02-001-02 for all generators except C79.

[2] NOx AP-42 Emission Factors 3.4 - Table 3.4-1; SCC 2-02-004-01 for C79 generator.

[3] SO2 AP-42 Emission Factors 3.3 - Table 3.3-1; SCC 2-02-001-02 for all generators except C79.

[4] SO2 AP-42 Emission Factors 3.4 - Table 3.4-1; SCC 2-02-004-01 for C79 generator. Sulfur content = 0.5%

Actual Emissions - Incinerators

| Emission unit | NOx emissions [tons/yr] ^[1] | | SO2 emissions [tons/yr] ^[2,3] | |
|---------------------------|---|------------------|---|------------------|
| | 10/2006 - 9/2007 | 10/2007 - 9/2008 | 10/2006 - 9/2007 | 10/2007 - 9/2008 |
| Thermal oxidizers TO3/TO4 | 13.69 | Not in operation | 0.12 | Not in operation |
| C70 RTO1/RTO2 | 7.50 | Not in operation | 0.00 | Not in operation |
| Total | 10.60 | | 0.06 | |

[1] All NOx emissions were determined using Continuous Emissions Monitoring Systems

[2] SO2 emissions from Thermal Oxidizers TO3/TO4 were determined using mass balance estimates of sulfur content in the wastes burned and an assumption all of the sulfur converted to SO2

[3] RTO SO2 emissions were based on a site specific emission factor. These units were used sparingly in 2007, and as a result SO2 emissions were very low

C21 Boiler fuel usage

| 2006 - 2007 Natural gas usage - C21 boilers | | | | | 2007 - 2008 Natural gas usage - C21 boilers | | | | |
|--|------------------|------------------|------------------|-------------------|--|------------------|------------------|-----------------|------------------|
| | C21-1 | C21-2 | C21-3 | C21-4 | | C21-1 | C21-2 | C21-3 | C21-4 |
| October | 20,320.70 | 10,077.90 | 20,371.80 | 40,635.00 | October | 532 | 87 | 419 | 1,064 |
| November | 1,472.00 | 486.40 | 648.30 | 1,417.00 | November | 247 | 256 | 241 | 1,064 |
| December | 1,933.00 | 182.00 | 1,378.00 | 2,290.00 | December | 3,808 | 862 | 159 | 2,400 |
| January | 1,007.70 | 182.70 | 432.50 | 1,515.00 | January | 2,282 | 862 | 191 | 2,796 |
| February | 5,737.00 | 1,709.00 | 736.00 | 3,550.00 | February | 3,411 | 862 | 592 | 3,423 |
| March | 573.00 | 112.00 | 183.00 | 661.00 | March | 2,366 | 1,063 | 5 | 3,798 |
| April | 2,128.50 | 1,273.20 | 522.90 | 1,989.10 | April | 966 | 500 | 4 | 1,288 |
| May | 2,115.10 | 837.30 | 219.90 | 2,239.10 | May | 1,061 | 3,387 | 1 | 18,326 |
| June | 11,603.00 | 3,790.00 | 9,411.00 | 22,235.00 | June | 8,945 | 6,280 | 24 | 17,688 |
| July | 11,954.30 | 4,641.50 | 15,589.30 | 22,526.70 | July | 0 | 601 | 49 | 1,035 |
| August | 532.00 | 220.00 | 241.90 | 504.00 | August | 0 | 5,167 | 2,049 | 10,807 |
| September | 532.00 | 87.00 | 113.00 | 1,064.00 | September | 1,406 | 646 | 97 | 688 |
| Annual total | 59,908.30 | 23,599.00 | 49,847.60 | 100,625.90 | Annual total | 25,024.43 | 20,572.98 | 3,828.73 | 64,375.50 |
| 2006 - 2007 fuel oil usage - C21 boilers (gal) | | | | | 2007 - 2008 Fuel oil usage - C21 boilers (gal) | | | | |
| | C21-1 | C21-2 | C21-3 | C21-4 | | C21-1 | C21-2 | C21-3 | C21-4 |
| October | 0.00 | 0.00 | 0.00 | 0.00 | October | 0.00 | 0.00 | 0.00 | 0.00 |
| November | 0.00 | 0.00 | 0.00 | 100.00 | November | 0.00 | 0.00 | 31.80 | 30.00 |
| December | 0.00 | 0.00 | 0.00 | 0.00 | December | 0.00 | 0.00 | 143.60 | 0.00 |
| January | 0.00 | 0.00 | 125.90 | 30.00 | January | 2,817.50 | 0.00 | 92.20 | 330.00 |
| February | 0.00 | 0.00 | 0.00 | 0.00 | February | 0.00 | 0.00 | 0.00 | 30.00 |
| March | 0.00 | 0.00 | 0.00 | 0.00 | March | 0.00 | 0.00 | 0.00 | 0.00 |
| April | 686.10 | 0.00 | 0.00 | 60.00 | April | 0.00 | 0.00 | 340.00 | 0.00 |
| May | 62.50 | 0.00 | 0.00 | 0.00 | May | 0.00 | 0.00 | 31.30 | 0.00 |
| June | 0.00 | 0.00 | 0.00 | 0.00 | June | 0.00 | 0.00 | 98.30 | 240.00 |
| July | 0.00 | 0.00 | 0.00 | 30.00 | July | 0.00 | 0.00 | 31.20 | 0.00 |
| August | 0.00 | 0.00 | 31.80 | 0.00 | August | 0.00 | 0.00 | 3,901.53 | 0.00 |
| September | 0.00 | 0.00 | 143.60 | 0.00 | September | 0.00 | 0.00 | 452.00 | 0.00 |
| Annual total | 748.60 | 0.00 | 301.30 | 220.00 | Annual total | 2,817.50 | 0.00 | 5,121.93 | 630.00 |



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Don Blair
Eli Lily & Company – Clinton Laboratories
10500 S SR 63
Clinton, IN 47840

DATE: July 19, 2011

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

SUBJECT: Final Decision
Significant Permit Modification
165-30354-00009

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
George Rogers - GM
Bernard Paul – B. Paul Consulting, LLC
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

July 19, 2011

TO: Clinton Public Library

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

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

Applicant Name: Eli Lily Company – Clinton Laboratories
Permit Number: 165-30354-00009

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

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

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

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|----------------------------|---|---|---|--|
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| 4 | | Vermillion County Health Department 257 Walnut Street Clinton IN 47842-2342 (Health Department) | | | | | | | | | | |
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| 7 | | J.P. Roehm PO Box 303 Clinton IN 47842 (Affected Party) | | | | | | | | | | |
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| 9 | | Bernard Paul B Paul Consulting, LLC 285 Spring Drive Zionsville IN 46077 (Consultant) | | | | | | | | | | |
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