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: August 21, 2008

RE: Eli Lilly and Company / 165-25674-00009

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.

Recycled Paper An Equal Opportunity Employer *Please Recycle*

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 impractible to raise such issues, or if the grounds for such objection arose after the comment period.

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

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

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

Enclosures
FNTV-PMOD.doc 3/27/08

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

Mr. Anurag Gupta
Eli Lilly and Company, Clinton Laboratories
10500 South State Road 63
Clinton, IN 47842-0099

August 21, 2008

Re: 165-25674-00009
Significant Permit Modification to
Part 70 No.: T165-6462-00009

Dear Mr.Gupta:

Eli Lilly and Company - Clinton Labs. was issued a Part 70 Operating Permit on October 1, 2004 for a stationary pharmaceutical manufacturing plant. A letter requesting changes to this permit was received on December 12, 2007. 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 modification consists of incorporating into the Part 70 Operating Permit the operation conditions of the equipment which were approved through Significant Source Modification No. 165-25636-00009.

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 Mehul Sura, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Mehul Sura or extension (4-5377), or dial (317) 234-5377.

Original signed by,

Tripurari P. Sinha, Ph. D., Section Chief
Permits Branch
Office of Air Quality

Attachments:
Modified Permit Pages
Technical Support Document

mns
cc: File – Vermillion County
Vermillion County Health Department
U.S. EPA, Region V
Air Compliance Inspector
Compliance Data Section
Permits Administration and Development

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

PART 70 OPERATING PERMIT
AND
PREVENTION OF SIGNIFICANT DETERIORATION (PSD)
FLEXIBLE PERMIT
OFFICE OF AIR QUALITY

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

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

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

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

Operation Permit No.: T165-6462-00009	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: October 1, 2004 Expiration Date: October 1, 2009

1st Significant Permit Modification No.:165-22481-00009, issued March 4, 2008

2nd Significant Permit Modification No.: 165-25674-00009	
Original signed by Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: August 21, 2008 Expiration Date: October 1, 2009

TABLE OF CONTENTS

A SOURCE SUMMARY 4
- A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]
- A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]
- A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

B GENERAL CONDITIONS 9
- B.1 Definitions [326 IAC 2-7-1]
- B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]
- B.2.1 Term of Conditions [326 IAC 2-1.1-9.5]
- B.3 Enforceability [326 IAC 2-7-7]
- B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]
- B.5 Severability [326 IAC 2-7-5(5)]
- B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
- B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
- B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]
- B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
- B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1), (3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]
- B.11 Emergency Provisions [326 IAC 2-7-16]
- B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]
- B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]
- B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]
- B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]
- B.16 Permit Renewal [326 IAC 2-7-4] [326 IAC 2-7-3] [326 IAC 2-7-8(e)]
- B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]
- B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]
- B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]
- B.20 Source Modification Requirement [326 IAC 2-7-10.5]
- B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-17-3-2] [IC 13-30-3-1]
- B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
- B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]
- B.24 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]
- B.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

C SOURCE OPERATION CONDITIONS 23

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]
- C.2 Opacity [326 IAC 5-1]
- C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
- C.4 Fugitive Dust Emissions [326 IAC 6-4]
- C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
- C.6 Stack Height [326 IAC 1-7]
- C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR Part 61, Subpart M]

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)] [326 IAC 3-5]
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]
C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]

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 Part 68]
C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [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)]
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] [326 IAC 2-3]

Stratospheric Ozone Protection
C.20 Compliance with 40 CFR Part 82 and 326 IAC 22-1

D SOURCE OPERATION SECTIONS 34
D.1 Utilities Operations
D.2 AHM – Fermentation Operations
D.3 AHM – Product Recovery Operations
D.4 AHM – Product Finishing Operations
D.5 Bulk Pharmaceutical Manufacturing (BPM) Production Operations
D.6 Support Operations – Solvent Recovery Operations
D.7 Support Operations – Solvent Storage Tank Conditions
D.8 Support Operations – Waste Tanks Conditions
D.9 Support Operations – Waste Container Conditions
D.10 Support Operations – Individual Drain System Conditions
D.11 Control Systems – RTO Operations
D.12 TO3/TO4 Liquid Waste Incinerators, Including Associated Air Pollution Control Equipment and Continuous Monitoring Systems
D.13 Solid Waste Incinerator Operating Conditions
D.14 Support Operations – General Wastewater Conditions
D.15 Support Operations – Transfer of Affected Wastewater for Offsite Treatment Conditions
D.16 Insignificant Activities

E SOURCE OPERATION SECTIONS 120
E.1 Leak Detection and Repair (LDAR) Conditions for BPM Process System Components
E.2 Leak Detection and Repair (LDAR) Conditions for Waste System Components

F SOURCE OPERATION SECTION 130
F.1 Change Management and Flexible Permit Conditions

SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary pharmaceutical manufacturing plant.

Source Address:	10500 South State Road 63, Clinton, Indiana, 47842
Mailing Address:	P.O. Box 99, Clinton, Indiana, 47842
Source Phone Number:	(765) 832-4400
SIC Code:	2833, 2834, 2879
County Location:	Vermillion County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program; Major Source under PSD; Major Source, Section 112 of the Clean Air Act; 1 of 28 Source Categories

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

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

(a) 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.

(b) D.2 Animal Health Manufacturing (AHM) – Fermentation Operations: The fermentation processes include the dry material storage area (C44A), the liquid material storage area (C44), raw material prep area (C43/C43A), the fermentation production areas (C41/C41A) and product storage area (C41). The detailed equipment list is located in Section D.2 of this permit.

(c) D.3 Animal Health Manufacturing (AHM) – Product Recovery Operations: The whole broth products from fermentation are continuously fed to the product recovery equipment as capacity allows. The product recovery operations consist of extraction, evaporation, centrifugation and drying processes (C45/C45A), solvent recovery (C45/C45A), raw and recovered material storage (C45), and product storage (C45/C45A). The detailed equipment list is located in Section D.3 of this permit.

(d) D.4 Animal Health Manufacturing (AHM) – Product Finishing Operations: The recovered and dried product from product recovery is continuously fed to the product finishing area as capacity allows. The product finishing operations consist of pelletizing, granulation, milling, mixing, conveying, blending and bagging equipment (C47/C47B/C47E). The detailed equipment list is located in Section D.4 of this permit.

(e) D.5 Bulk Pharmaceutical Manufacturing (BPM) – Process Operations: The emission units in the BPM production operations have been permanently shut down and are designated for demolition. The applicable requirements for emission units in the BPM production operations that were permitted earlier are provided in Section D.5 of this permit.

(f) D.6 Bulk Pharmaceutical Manufacturing (BPM) – Solvent Recovery Operations: The BPM solvent recovery emission units have been permanently shut down and are designated for demolition. The applicable requirements for emission units in the solvent recovery operations that were permitted earlier are provided in Section D.6 of this permit.

(g) D.7 Bulk Pharmaceutical Manufacturing (BPM) – Solvent Storage Tank Operations: The BPM solvent storage tanks have been permanently shut down and are designated for demolition. The applicable requirements for solvent storage tanks that were permitted earlier are provided in Section D.7 of this permit.

(h) D.8 Waste Storage Tank Operations: The waste storage tanks are defined as any waste management unit designed to contain an accumulation of affected wastewater or offsite waste material containing VOCs and/or VOHAP. Pressure vessels greater than 204.9 kPa without emissions to the atmosphere or vessels attached to motor vehicles are not waste storage tanks. The detailed equipment list is located in Section D.8 of this permit.

(i) D.9 Waste Containers: Waste containers are segregated into small and large containers. A small waste container, such as a drum, contains affected wastewater or offsite waste material containing VOC/VOHAP with a capacity greater than 26.4 gallons and equal to or less than 110.5 gallons. A large waste container, such as a melon or a tanker truck, contains affected wastewater or offsite waste material containing VOC/VOHAP with a capacity greater than 110.5 gallons. Identification of these types of containers have not been individually listed given they are portable and continually change.

(j) D.10 BPM Individual Drain Systems (IDSs): The BPM IDSs have been permanently shut down and are designated for demolition. The applicable requirements for individual drain systems that were permitted earlier are provided in Section D.10 of this permit.

(k) D.11 Control Systems – RTO Operations: The regenerative thermal oxidizer (RTO) system consists of a closed-vent system that transports fume streams exhausted from the waste storage operations to the RTOs. The RTOs, designed to thermally destruct the VOC and/or VOHAP laden fume streams from the waste storage operations, are also equipped with caustic scrubbing systems to control hydrogen halide and halogen emissions. The detailed equipment list is located in Section D.11 of this permit.

(l) D.12 Control Systems – TO3/TO4 Liquid Waste Incinerators: The TO3/TO4 liquid waste incinerators provide treatment of Lilly hazardous and non-hazardous waste to support its operational requirements, including high Btu liquids (primary waste) and low Btu liquids (secondary waste). The TO3/TO4 incinerators consist of a primary combustion chamber followed by a wet quench system, a condenser/absorber, a Hydro-Sonic® scrubber, a polishing scrubber, and a stack with continuous emissions monitoring. The detailed equipment list is located in Section D.12 of this permit.

(m) D.13 Bartlett-Snow Solid Waste Incinerator: The Bartlett-Snow solid waste incinerator was permanently shut down on August 30, 2005 and is designated for demolition. The applicable requirements for Bartlett-Snow solid waste incinerator that was permitted earlier are provided in Section D.13 of this permit.

(n) D.14 Support Operations - General Wastewater Conditions: The emission units associated with the wastewater operations can generally be described as storage and transfer facilities (wastewater tanks and containers) and treatment facilities (incineration or off-site treatment). The specific emission units are described in Sections D.8, D.9, D.12 and D.15 of this permit. The general conditions for these types of operations are described in Section D.14 of this permit.

(o) D.15 Support Operations – Transfer of Affected Wastewater for Offsite Treatment Conditions: The transfer of affected wastewater for offsite treatment relates to either the shipment of affected wastewater stored onsite to an offsite treatment facility, or receipt of an offsite affected wastewater to be treated onsite. The specific conditions for these types of operations are described in Section D.15 of this permit.

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

(a) This stationary source consists of 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 PM_{10} per hour or 25 pounds PM_{10} per day. [326 IAC 6-3]

(2) D.8 Waste Storage Tank Operations: Various waste tanks containing affected wastewater or offsite waste material, each emitting less than 3 pounds VOC per hour or 15 pounds VOC per day. [40 CFR 63.1256(b), 40 CFR 63.685, 40 CFR 60.110b, 326 IAC 2-2, and 326 IAC 8-5-3]

(3) D.9 Waste Containers: Small and large waste containers in the operating areas, containing affected wastewater or offsite waste material, each emitting less than 3 pounds VOC per hour or 15 pounds VOC per day. [40 CFR 63.1256(d), 40 CFR 63.688, 326 IAC 2-2]

(4) D.16 Insignificant Activities: 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.

(b) This stationary source consists of the following types of 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 annual throughputs less than 12,000 gallons;

(8) VOC/HAP storage vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(9) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases;

(10) Cleaners and solvents with a combined use less than or equal to 145 gallons per 12 months characterized having a vapor pressure equal to or less than 2 kPa, 15 mm Hg, or 0.3 psi measured at 38°C (100°F); or having a vapor pressure equal to or less than 0.7 kPa, 5 mm Hg, or 0.1 psi measured at 20°C (68°F);

(11) Closed loop heating and cooling systems;

(12) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an on-site sewage treatment facility;

(13) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;

(14) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs;

(15) Noncontact cooling tower systems that are forced and induced draft cooling tower systems not regulated under a NESHAP;

(16) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(17) Heat exchanger cleaning and repair;

(18) Process vessel degassing and cleaning to prepare for internal repairs;

(19) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal;

(20) Paved and unpaved roads and parking lots with public access;

(21) Covered conveyors for coal or coke conveying of less than or equal to 360 tons per day;

(22) Coal bunker and coal scale exhausts and associated dust collector vents;

(23) Asbestos abatement projects regulated by 326 IAC 14-10;

(24) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process;

(25) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup including catch tanks, temporary liquid separators, tanks and fluid handling equipment;

(26) Blowdown from sight glasses; boilers; compressors; pumps; and cooling towers;

(27) On-site fire and emergency response training approved by the department;

(28) Emergency generators including gasoline generators not exceeding 110 horsepower, diesel generators not exceeding 1,600 horsepower; and natural gas turbines or reciprocating engines not exceeding 16,000 horsepower;

(29) Stationary fire pumps;

(30) Purge double block and bleed valves;

(31) Filter or coalescer media changeout;

(32) Vents from ash transport systems not operated at positive pressure;

(33) A laboratory as defined in 326 IAC 2-7-1(21)(D);

(34) Farm operations; and

(35) Other activities below insignificant threshold levels:

(A) Building C86 10,000-gallon storage tank or other portable container(s) for storing hexane used for fire training with emissions less than 5 pounds per day or 1 ton per year of a single HAP.

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

This permit, T165-6462-00009, 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.

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]

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.

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

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

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

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

(b) The Permittee shall implement the PMPs, including any required record keeping as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.

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

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

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

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

(e) 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 in 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 Sections 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 E – Incinerators:** This source is not subject to 40 CFR Part 60, Subpart E because none of the incinerators at plant site exceed a charging rate of 50 metric tons per day. [40 CFR 60.50(a)]

(3) **40 CFR Part 60, Subparts VV, III, NNN and RRR – Synthetic Organic Chemical Manufacturing:** This source is not subject to 40 CFR Part 60, Subparts VV, III, NNN, and RRR because the source is not engaged in the manufacture of synthetic organic chemicals as defined by those standards. The source does not produce, as an intermediate, final product, co-product, or by-product, a chemical listed in 40 CFR 60.489 [Subpart VV], 40 CFR 60.617 [Subpart III], 40 CFR 60.667 [Subpart NNN], or 40 CFR 60.707 [Subpart RRR].

(4) **Section 111(d) Emission Guidelines:** No emission guidelines in 40 CFR Part 60, 40 CFR Part 62, Subpart P, and 326 IAC 11 are applicable to this source because the source does not own or operate an affected facility subject to those requirements.

(5) **40 CFR Part 61, Subpart C – Beryllium:** This source is not subject to 40 CFR Part 61, Subpart C and 326 IAC 14-3 because the incinerators at the source do not incinerate beryllium containing waste. [40 CFR 61.30(a) and 40 CFR 61.31(g)]

(6) **40 CFR Part 61, Subpart E – Mercury:** This source is not subject to 40 CFR Part 61, Subpart E and 326 IAC 14-5, which applies to, among other things, incinerators burning wastewater treatment plant sludge because the source does not incinerate wastewater treatment plant sludge in its incinerators. [40 CFR 61.50]

(7) **40 CFR Part 61, Subpart FF – Benzene Waste Operations:** This source is identified as the type of facility subject to 40 CFR Part 61, Subpart FF, which applies to benzene waste operations. However, the total annual benzene quantity from facility waste is less than 10 megagrams per year (11 ton/year) and therefore the source is exempt from the specific requirements of 40 CFR Part 61, Subpart FF. [40 CFR 61.342(a)].

(8) **40 CFR Part 63, Subparts F and G – Synthetic Organic Chemical Manufacturing:** This source is not subject to 40 CFR Part 63, Subparts F and G (326 IAC 20-11) because the source does not manufacture compounds listed in Table 1 of Subpart F or use as a reactant compounds listed in Table 2 of Subpart F. [40 CFR 63.100(b)]

(9) **40 CFR Part 63, Subpart O – Ethylene Oxide Sterilizers:** This source is not subject to 40 CFR Part 63, Subpart O and 326 IAC 20-5 because the source does not utilize ethylene oxide in sterilization operations. [40 CFR 63.360]

(10) **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]

(11) **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]

(12) **40 CFR Part 63, Subpart YY – Generic MACT Categories:** This source is not subject to 40 CFR Part 63, Subpart YY and 326 IAC 20-44 because the source is not one of the source categories described in 40 CFR 63.1103. [40 CFR 63.1100]

(13) **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]

(14) **40 CFR Part 63, Subpart FFFF – Miscellaneous Organic Chemical Production and Processes**: This source is not subject to 40 CFR Part 63, Subpart FFFF because the source does not contain any miscellaneous organic chemical manufacturing process units (MCPU) that would be subject to Subpart FFFF.

(15) **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.

(16) **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.

(17) **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.

(18) **326 IAC 8-6 – Organic Solvent Emissions Limitations**: The provisions of 326 IAC 8-6 are not applicable to this source because the source is subject to other rules in 326 IAC 8.

(19) **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.

(20) **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.

(21) **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.

(22) **40 CFR Part 60, Subpart Ec – Hospital/Medical/Infectious Waste Incinerators:** This source does not contain any emission units described in 40 CFR Part 60, Subpart Ec. Therefore, the source is not subject to the requirements of those rules.

(23) **40 CFR Part 60, Subpart CCCC – Commercial-Industrial Solid Waste Incinerators:** This source does not contain any emission units described in 40 CFR Part 60, Subpart CCCC. Therefore, the source is not subject to the requirements of those rules.

(24) **40 CFR Part 63, Subpart I – Equipment Leaks:** This source does not have any pharmaceutical production processes that use carbon tetrachloride or methylene chloride, or any other processes described in 40 CFR Part 63, Subpart I. Therefore, the source is not subject to the requirements of those rules.

(25) **40 CFR Part 63, Subpart RR – Individual Drain Systems:** This source does not have any individual drain systems that are described in 40 CFR Part 63, Subpart RR. Therefore, the source is not subject to the requirements of those rules.

(26) **40 CFR Part 63, Subpart EEEE – Organic Liquids Distribution:** This source does not have any organic liquid distribution operations described in 40 CFR Part 63, Subpart EEEE. Therefore, the source is not subject to the requirements of those rules.

(27) **326 IAC 9 – Carbon Monoxide Rules:** Except for TO3/TO4 liquid waste incinerators, this source does not contain any emission units subject to the provisions of 326 IAC 9-1-2. TO3/TO4 liquid waste incinerators are not subject to the requirements of 326 IAC 9-1 because they are subject to the requirements of 40 CFR Part 63, Subpart EEE. Therefore, this source is not subject to the requirements of 326 IAC 9-1.

(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]

(a) All terms and conditions of permits established prior to T165-6462-00009, issued October 1, 2004 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 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, Condition B.11 - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

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

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

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

B.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 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:

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

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

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

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

(B) 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.

(2) If IDEM, OAQ, upon receiving a timely and complete 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.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

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

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

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

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

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

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

(d) No permit amendment or modification is required for the addition, operation, or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

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

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

B.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 have been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in 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] [326 IAC 2-2]

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

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

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

(a) Enter upon the Permittee's premises where a 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.

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

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

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

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

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

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

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 [Ask for OAQ, Billing, Licensing, and Training Section (BLT)].

B.24 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

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

(b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from

the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314]][326 IAC 1-1-6]

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

SECTION C **SOURCE OPERATION CONDITIONS**

Entire Source

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

C.1 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 manufacturing 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 Part 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. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

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

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

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 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 Part 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) 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 Part 51, 40 CFR Part 60, 40 CFR Part 61, 40 CFR Part 63, 40 CFR Part 75, or other procedures approved by IDEM, OAQ.

All test protocols, except as provided elsewhere in this permit, shall be submitted to:

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

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

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

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM 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 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 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:

(1) Date of 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.

(g) The Permittee shall prepare and submit to IDEM, OAQ a written report of the results of the quarterly cylinder gas audits and annual relative accuracy test audits within thirty (30) days after the end of each calendar quarter. The report must contain the information required by 326 IAC 3-5-5(e)(2). 326 IAC 3-5-5(e)(2) is not federally enforceable.

(h) If the Permittee is required by 326 IAC 3-5-4(a) and Section D to prepare and implement a written standard operating procedure (SOP) for CEMS, it must be submitted to IDEM, OAQ within ninety (90) days after monitor installation. If revisions are made to the SOP, updates shall be submitted to IDEM, OAQ biennially. 326 IAC 3-5-4(a) is not federally enforceable.

C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)] [326 IAC 3-5]

(a) As specified in Section D.1 of this permit, the Permittee shall install, calibrate, maintain, and operate the necessary continuous opacity monitoring system (COMS) and related equipment. For the boiler, the COMS shall be in operation at all times that fuel is being combusted in the boiler, except during COMS malfunctions and reasonable periods of necessary COMS calibrations, audits, maintenance, or repair activities.

(b) The continuous opacity monitoring system is subject to the applicable performance and operating specifications, monitor system certification requirements, and quality assurance and quality control (QA/QC) requirements pursuant to 326 IAC 3-5.

(c) In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever a continuous opacity monitoring system (COMS) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of two (2) hours or more; or is down for the required audits for a period of four (4) hours or more – compliance with the applicable opacity limits shall be demonstrated by the following:

(1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the COMS. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.

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

(B) If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin 40 CFR Part 60, Appendix A, Method 9 opacity observations within four hours of the second abnormal notation.

(C) VE notations may be discontinued once the COMS is back online or formal Method 9 readings have been implemented. Method 9 readings may be discontinued once the COMS is back online.

(2) If the COMS does not come back online within twenty-four (24) hours of beginning of shutdown or malfunction, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.

(A) Visible emission readings shall be performed in accordance with 40 CFR Part 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the shutdown or malfunction.

(B) Method 9 opacity readings shall be repeated for a minimum five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that the COMS is back in operation.

(C) Method 9 readings may be discontinued once the COMS is back online.

(D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Deviation and COMS Excess Emissions Reports.

(3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with the Compliance Response Plan required by Condition C.15. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with the Compliance Response Plan shall be considered a violation of this permit.

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 prepared and submitted its most recent written emergency reduction plan (ERP) consistent with safe operating procedures on March 26, 1998.

(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 Part 68]

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

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Whenever a Testing and Monitoring condition establishes the requirement to implement a Compliance Response Plan (CRP), the Permittee shall prepare a CRP in conformance with this condition. If a Permittee is required to have an Operation, Maintenance and Monitoring (OMM) Plan (or Parametric Monitoring Plan (PMP) and Start-up, Shutdown, and Malfunction (SSM) Plan) under 40 CFR Part 60/63, such plans shall be deemed to satisfy the requirements for a CRP for those monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current CRP or OMM Plan (or Parametric Monitoring Plan and SSM Plan) and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its CRP or OMM Plan (or Parametric Monitoring Plan and SSM Plan) to include such response steps taken.

The OMM Plan (or PMP and SSM Plan) shall be submitted within the time frames specified by the applicable 40 CFR Part 60/63 requirement.

(b) Reasonable response steps shall be taken when indicated by the provisions of a monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current CRP or OMM Plan (or Parametric Monitoring Plan and SSM Plan); or

(2) If none of the reasonable response steps listed in the CRP or OMM Plan (or Parametric Monitoring Plan and SSM Plan) is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.

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

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) When implementing reasonable steps in response to a monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B, Condition B.14 - Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C, Condition C.8 - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

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

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

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

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

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]

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

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a).

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

The statement must be submitted to:

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

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

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

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

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

(c) If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in a significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 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(ll)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

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

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

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

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

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

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

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

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

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar years" means the twelve (12) consecutive month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of Condition C.18(c) 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 Condition C.18(c)(1) exceed the baseline actual emissions, as documented and maintained

under Condition C.18(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 Condition C.18(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 Conditions C.18(c)(2) and (3).

(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 condition shall be submitted to:

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

(h) The Permittee shall make the information required to be documented and maintained in accordance with Condition C.18(c) available for review upon a request for inspection by the Indiana Department of Environmental Management. The general public may request this information from the Indiana Department of Environmental Management under 326 IAC 17.1.

Stratospheric Ozone Protection

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

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

SECTION D.1 UTILITIES OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in these facility description boxes is descriptive information and does not constitute enforceable conditions.

(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	PVC31ESP	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.

(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.

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 (SO_2) [326 IAC 7-4-8]

(a) Pursuant to 326 IAC 7-4-8 (SO_2 Emission Limitations), the SO_2 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 (SO_2 Emission Limitations), the SO_2 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) The Permittee shall perform particulate matter performance tests for the coal-fired boiler (C31 BLR01) utilizing Methods 5 or 17 (40 CFR Part 60, Appendix A) for PM or other methods as approved by the Commissioner. The initial stack test(s) must be completed within 36 months after initial issuance of this permit and within 180 days after initial startup of the baghouse. 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 SO_2 [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)]

D.1.7 Fuel Oil Sampling and Analysis for SO_2 [326 IAC 7-2] [326 IAC 3-7]

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)].

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

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 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with coal-fired boiler C31 at least once per day when the boiler is in operation and combusting coal as fuel. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Condition C.15 – Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Condition C.15 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The span of the pressure drop monitor shall be less than 50 inches of water and the pressure drop gauge shall be calibrated annually.

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 Fuel Oil Characteristics and Consumption Records

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.

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 Baghouse Record Keeping Requirements

To document compliance with Condition D.1.9, the Permittee shall maintain daily records of the pressure drop reading for the baghouse associated with coal fired boiler C31. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of these readings (e.g. the process did not operate that day).

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 D section are not subject to the advance approval permit conditions.

SECTION D.2 AHM – FERMENTATION OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in these facility description boxes is descriptive information and does not constitute enforceable conditions.

(a) The following emissions units have applicable conditions in this D section.

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
C41	TKF01	Fermenter	PVC41F01	Cyclone F1VLS	50,000	Gallons
C41	TKF02	Fermenter	PVC41F02	Cyclone F2VLS	50,000	Gallons
C41	TKF03	Fermenter	PVC41F03	Cyclone F3VLS	50,000	Gallons
C41	TKF04	Fermenter	PVC41F04	Cyclone F4VLS	50,000	Gallons
C41	TKF05	Fermenter	PVC41F05	Cyclone F5VLS	50,000	Gallons
C41	TKF06	Fermenter	PVC41F06	Cyclone F6VLS	50,000	Gallons
C41	TKF07	Fermenter	PVC41F07	Cyclone F7VLS	50,000	Gallons
C41	TKF08	Fermenter	PVC41F08	Cyclone F8VLS	50,000	Gallons
C41	TKF09	Fermenter	PVC41F09	Cyclone F9VLS	50,000	Gallons
C41	TKF10	Fermenter	PVC41F10	Cyclone F10VLS	50,000	Gallons
C41	TKF11	Fermenter	PVC41F11	Cyclone F11VLS	50,000	Gallons
C41	TKF12	Fermenter	PVC41F12	Cyclone F12VLS	50,000	Gallons
C41	TKF13	Fermenter	PVC41F13	Cyclone F13VLS	50,000	Gallons
C41	TKF14	Fermenter	PVC41F14	Cyclone F14VLS	50,000	Gallons
C41	TKF15	Fermenter	PVC41F16	Cyclone F15VLS	50,000	Gallons
C41	TKF16	Fermenter	PVC41F16	Cyclone F16VLS	50,000	Gallons
C41A	TKF17	Fermenter	PVC41AF17	Cyclone F17VLS	50,000	Gallons
C41A	TKF18	Fermenter	PVC41AF18	Cyclone F18VLS	50,000	Gallons
C41A	TKF19	Fermenter	PVC41AF19	Cyclone F19VLS	50,000	Gallons
C41A	TKF20	Fermenter	PVC41AF20	Cyclone F20VLS	50,000	Gallons
C41A	TKF21	Fermenter	PVC41AF21	Cyclone F21VLS	50,000	Gallons
C41A	TKF22	Fermenter	PVC41AF22	Cyclone F22VLS	50,000	Gallons
C41A	TKF23	Fermenter	PVC41AF23	Cyclone F23VLS	50,000	Gallons
C41A	TKF24	Fermenter	PVC41AF24	Cyclone F24VLS	50,000	Gallons
C41A	TKF25	Fermenter	PVC41AF25	Cyclone F25VLS	50,000	Gallons
C41A	TKF26	Fermenter	PVC41AF26	Cyclone F26VLS	50,000	Gallons
C41A	TKF27	Fermenter	PVC41AF27	Cyclone F27VLS	50,000	Gallons
C41A	TKF28	Fermenter	PVC41AF28	Cyclone F28VLS	50,000	Gallons
C41A	TKF29	Fermenter	PVC41AF29	Cyclone F29VLS	50,000	Gallons
C41A	TKF30	Fermenter	PVC41AF30	Cyclone F30VLS	50,000	Gallons
C41A	TKF31	Fermenter	PVC41AF31	Cyclone F31VLS	50,000	Gallons
C41A	TKF32	Fermenter	PVC41AF32	Cyclone F32VLS	50,000	Gallons
C44A	TK047	Vibrating Bin	PVC44AC047	Baghouse VS047**	42,000	Kg
C44A	TK048	Vibrating Bin	PVC44AC048	Baghouse VS048**	43,680	Kg
C44A	TK049	Vibrating Bin	PVC44AC049	Baghouse VS049**	43,680	Kg
C44A	TK050	Vibrating Bin	PVC44AC050	Baghouse VS050**	42,000	Kg
C44A	TK051	Vibrating Bin	PVC44AC047	Baghouse VS047**	42,000	Kg

C44A	TK052	Vibrating Bin	PVC44AC052	Baghouse VS052**	37,408	Kg
C44A	TK053	Vibrating Bin	PVC44AC052	Baghouse VS052**	37,408	Kg
C44A	TK054	Vibrating Bin	PVC44AC050	Baghouse VS050**	42,000	Kg
C44A	TK055	Vibrating Bin	PVC44AC055	Baghouse VS055**	43,680	Kg
C44A	TK056	Vibrating Bin	PVC44AC055	Baghouse VS055**	43,680	Kg
C44A	TK057	Vibrating Bin	PVC44AC055	Baghouse VS055**	43,680	Kg
C44A	TK058	Vibrating Bin	PVC44AC055	Baghouse VS055**	43,680	Kg
C43A	TK301	Batch Fermenter Tank	PVC43AAC301	Filter FLT301**, Baghouse VS311	7,500	Gallons
C43A	TK302	Batch Fermenter Tank	PVC43AAC301	Filter FLT302**, Baghouse VS311	7,500	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.

(b) The following emissions units do not have applicable conditions in this D section.

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
C41	TKB01*	Bump Tank	PVC41B01	Cyclone B1VLS	7,000	Gallons
C41	TKB02*	Bump Tank	PVC41B02	Cyclone B2VLS	7,000	Gallons
C41	TKB03*	Bump Tank	PVC41B03	Cyclone B3VLS	7,000	Gallons
C41	TKB04*	Bump Tank	PVC41B04	Cyclone B4VLS	7,000	Gallons
C41	TKB05*	Bump Tank	PVC41B05	Cyclone B5VLS	7,000	Gallons
C41	TKB06*	Bump Tank	PVC41B06	Cyclone B6VLS	7,000	Gallons
C41	TKB07*	Bump Tank	PVC41B07	Cyclone B7VLS	7,000	Gallons
C41	TKB08*	Bump Tank	PVC41B08	Cyclone B8VLS	7,000	Gallons
C41	TKB09*	Bump Tank	PVC41B09	Cyclone B9VLS	7,000	Gallons
C41	TKB10*	Bump Tank	PVC41B10	Cyclone B10VLS	7,000	Gallons
C41	TKB11*	Bump Tank	PVC41B11	Cyclone B11VLS	7,000	Gallons
C41	TKB12*	Bump Tank	PVC41B12	Cyclone B12VLS	7,000	Gallons
C41	TKB13*	Bump Tank	PVC41B13	Cyclone B13VLS	7,000	Gallons
C41	TKB14*	Bump Tank	PVC41B14	Cyclone B14VLS	7,000	Gallons
C41	TKB15*	Bump Tank	PVC41B15	Cyclone B15VLS	7,000	Gallons
C41	TKB16*	Bump Tank	PVC41B16	Cyclone B16VLS	7,000	Gallons
C41A	TKB22*	Bump Tank	PVC41AB22	Cyclone B17VLS	7,000	Gallons
C41A	TKB24*	Bump Tank	PVC41AB24	Cyclone B18VLS	7,000	Gallons
C41A	TKB26*	Bump Tank	PVC41AB26	Cyclone B19VLS	7,000	Gallons
C41A	TKB28*	Bump Tank	PVC41AB28	Cyclone B20VLS	7,000	Gallons
C43A	SM311*	Screw Mixer	PVC43AAC304	Baghouse VS311	N/A	N/A
C43A	TK305*	Mineral Pot	PVC43AAC305	Filter FLT305	80	Gallons
C41	TKH01*	Hold Tank	PVC41TKH01		20,000	Gallons
C41	TKH02*	Hold Tank	PVC41TKH02		20,000	Gallons
C41	TKH03*	Hold Tank	PVC41TKH03		50,000	Gallons
C41	TKH04*	Hold Tank	PVC41TKH04		50,000	Gallons
C41	TKH05*	Hold Tank	PVC41TKH05		50,000	Gallons
C41	TKA01*	Additive Tank	PVC41TKA01	Cyclone VLS01	8,000	Gallons
C41	TKA02*	Additive Tank	PVC41TKA02	Cyclone VLS02	8,000	Gallons
C41	TKA03*	Additive Tank	PVC41TKA03	Cyclone VLS03	8,000	Gallons
C41	TKA04*	Additive Tank	PVC41TKA04	Cyclone VLS04	8,000	Gallons
C41	TKA05*	Additive Tank	PVC41TKA05	Cyclone VLS05	8,000	Gallons

C41	TKA06*	Additive Tank	PVC41TKA06	Cyclone VLS06	8,000	Gallons
C41A	TKA08*	Additive Tank	PVC41ATKA08	Cyclone VLS08	8,000	Gallons
C41A	TKA09*	Additive Tank	PVC41ATKA09	Cyclone VLS09	8,000	Gallons
C25	TK1*	Land Application Tank	PVC25TK1		500,000	Gallons
C98	TK001*	Land Application Tank	PVC98TK001		10,000	Gallons
C98	TK002*	Land Application Tank	PVC98TK002		600	Gallons
C98	TK003*	Land Application Tank	PVC98TK003		15,000	Gallons
C25	TK2*	Land Application Tank	PVC25TK2		500,000	Gallons
C25	TK3*	Land Application Tank	PVC25TK3		1,000,000	Gallons
CO7	TK30*	Land Application Tank	PVC7TK30		15,000	Gallons
CO7	TK5*	Land Application Tank	PVC7TK5		230,000	Gallons
CO7	TK5A*	Land Application Tank	PVC7TK5A		230,000	Gallons
C41A	TK001*	Condensate Tank	PVC41TK001		N/AV	N/AV
C41	TK002*	Condensate Tank	PVC41TK002		N/AV	N/AV
C41	TK003*	Condensate Tank	PVC41TK003		N/AV	N/AV
C44	TKL21*	Liquid Bulk Tank	PVC44TKL21		20,000	Gallons
C44	TKL22*	Liquid Bulk Tank	PVC44TKL22		20,000	Gallons
C44	TKL31*	Liquid Bulk Tank	PVC44TKL31		30,000	Gallons
C44	TKL32*	Liquid Bulk Tank	PVC44TKL32		30,000	Gallons
C44	TKL33*	Liquid Bulk Tank	PVC44TKL33		30,000	Gallons
C44	TKL34*	Liquid Bulk Tank	PVC44TKL34		30,000	Gallons
C44	TKL35*	Liquid Bulk Tank	PVC44TKL35		30,000	Gallons
C44	TKL36*	Liquid Bulk Tank	PVC44TKL36		30,000	Gallons
C44	TKL37*	Liquid Bulk Tank	PVC44TKL37		30,000	Gallons
C44	TKL51*	Liquid Bulk Tank	PVC44TKL51		50,000	Gallons
C44	TKL52*	Liquid Bulk Tank	PVC44TKL52		50,000	Gallons
C44	TKL53*	Liquid Bulk Tank	PVC44TKL53		50,000	Gallons
C44	TKL54*	Liquid Bulk Tank	PVC44TKL54		50,000	Gallons
C44A	AC410*	Vacuum Cleaning System	PVC44AACHOUS EVAC	Cyclone VS410B, Baghouse VS410A	N/A	N/A
C43A	VS202B*	Dust Collection Baghouse	PVC43AAC304		N/A	N/A
C44	WH059*	Weigh Hopper	PVC44VS059	Baghouse VSWH059	8,000	Kg
C44	WH060*	Weigh Hopper	PVC44VS060	Baghouse VSWH060	8,000	Kg
C44	WH061*	Weigh Hopper	PVC44VS061	Baghouse VSWH061	8,000	Kg
C43A	WI001*	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.

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

A Preventive Maintenance Plan (PMP) is required for the required facilities and control devices (marked with a double asterisk in the above table), that are 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.

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

D.2.4 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.

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

D.2.5 Record Keeping Requirements

The Permittee shall maintain records of the Notification of Compliance Status Report (NOCSR), submitted to IDEM on March 20, 2003.

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

D.2.6 Modifications and Construction: Advance Approval of Permit Conditions

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

SECTION D.3 AHM – PRODUCT RECOVERY OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in these facility description boxes is descriptive information and does not constitute enforceable conditions.

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

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
C45A	BL410	RECYCLE BLENDER	PVC45AAC460	Carbon Adsorber CA460**	N/A	N/A
C45A	CENT401B*	CENTRIFUGE	N/A		N/A	N/A
C45A	CENT401C*	CENTRIFUGE	N/A		N/A	N/A
C45A	COS401D	SCREW CONVEYOR	N/A		N/A	N/A
C45A	COS420A	SCREW CONVEYOR	N/A		N/A	N/A
C45A	COS420L	SCREW CONVEYOR	N/A		N/A	N/A
C45A	COS421A*	SCREW CONVEYOR	N/A		N/A	N/A
C45A	COS421L*	SCREW CONVEYOR	N/A		N/A	N/A
C45A	D420	DRYER	PVC45AAC460	Carbon Adsorber CA460**	N/A	N/A
C45A	D421	DRYER	PVC45AAC460	Carbon Adsorber CA460**	N/A	N/A
C45A	EV450*	EVAPORATOR	PVC45AAC460	Vent Condenser HE450E, Carbon Adsorber CA460**	180	Gallons
C45A	SM410A	SCREW CONVEYOR MIXER	N/A		N/A	N/A
C45	TK370A*	NEW AMYL TANK	PVC45TK370A		38,265	Gallons
C45	TK370B*	NEW AMYL TANK	PVC45TK370B		20,834	Gallons
C45A	TK401*	WASH ALCOHOL HOLDING TANK	PVC45AAC460	Carbon Adsorber CA460**	4,259	Gallons
C45A	TK401G*	STORAGE TANK	PVC45AAC460	Carbon Adsorber CA460**	1,342	Gallons
C45A	TK450A*	STORAGE TANK	PVC45AAC460	Carbon Adsorber CA460**	100	Gallons
C45	VS156	TRANSFER BAGHOUSE	PVC45AC156A		N/A	N/A
C45	VS173	TRANSFER BAGHOUSE	PVC45AC173		N/A	N/A
C45	VS174	TRANSFER BAGHOUSE	PVCAC174A/174B		N/A	N/A
C45A	VS400*	TRANSFER BAGHOUSE	PVC45AAC400A		N/A	N/A
C45A	VS420B*	TRANSFER BAGHOUSE	PVC45AAC460	Carbon Adsorber CA460**	N/A	N/A
C45A	VS421B*	TRANSFER BAGHOUSE	PVC45AAC460	Carbon Adsorber CA460**	N/A	N/A
C45A	VS480A*	TRANSFER BAGHOUSE	PVC45AAC460	Carbon Adsorber CA460**	N/A	N/A
C45A	VS480B*	TRANSFER BAGHOUSE	PVC45AAC460	Carbon Adsorber CA460**	N/A	N/A
C45	TK350C*	RECYCLED AMYL TANK	PVC45TK350C		20,834	Gallons
C45	TK350D*	RECYCLED AMYL TANK	PVC45TK350D		20,834	Gallons
C45	TK360C*	RECYCLED AMYL TANK	PVC45TK360C		20,834	Gallons
C45	TK361C*	RECYCLED AMYL TANK	PVC45TK361C		20,834	Gallons

* 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.

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

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
C45	EV002	EVAPORATOR	PVC45EV002		9,000	Gallons
C45	TK407*	CONTENTS EVAPS CLEANING	PVC45AAC407		15,000	Gallons
C45	TK408*	CONTENTS EVAPS CLEANING	PVC45AAC408		15,000	Gallons
C45	C24*	CENTRIFUGE	N/A		N/A	N/A
C45	CENT114*	CENTRIFUGE	N/A		N/A	N/A
C45	CENT115*	CENTRIFUGE	N/A		N/A	N/A
C45	CENT116*	CENTRIFUGE	N/A		N/A	N/A
C45	CENT117*	CENTRIFUGE	N/A		N/A	N/A
C45	COL201*	DISTILLATION COLUMN	PVC45TK201		2,100	Gallons
C45	COL204*	DISTILLATION COLUMN	PVC45TK204		3,800	Gallons
C45	COL219*	DISTILLATION COLUMN	PVC45TK219		3,800	Gallons
C45	COS109A	SCREW CONVEYOR	PVC45AC140A	Carbon Adsorber CA140	N/A	N/A
C45	COS109B*	SCREW CONVEYOR	N/A		N/A	N/A
C45	COS109D*	SCREW CONVEYOR	N/A		N/A	N/A
C45	COS109G*	SCREW CONVEYOR	N/A		N/A	N/A
C45	COS153*	SCREW CONVEYOR	PVC45COS153	Vent Sock VS153B	N/A	N/A
C45	COS160A*	SCREW CONVEYOR	N/A		N/A	N/A
C45	COS160B*	SCREW CONVEYOR	N/A		N/A	N/A
C45	COS260*	SCREW CONVEYOR	N/A		N/A	N/A
C45	D160/VLS160	DRYER/VAPOR-LIQUID SEPARATOR	PVC45CA140A	Carbon Adsorber CA140	N/A	N/A
C45	D260/VLS260	DRYER/VAPOR-LIQUID SEPARATOR	PVC45CA140A	Carbon Adsorber CA140	N/A	N/A
C45	D16/VS16*	DRYER/TRANSFER BAGHOUSE	PVC45AC016A		N/A	N/A
C45	DP17*	DRUM PACKER	PVC45AC18	Baghouse VS18	N/A	N/A
C45	EV101	EVAPORATOR	PVC45EV101		9,000	Gallons
C45	EV108*	EVAPORATOR	PVC45EV108		1,000	Gallons
C45	EV202*	EVAPORATOR	PVC45EV202		937	Gallons
C45	FIL109	FILTER BELT	PVC45AC140A	Carbon Adsorber CA140	N/A	N/A
C45	VF109*	VIBRATORY FEEDER	PVC45AC18	Baghouse VS18	N/A	N/A
C45	H107*	HOPPER	PVC45AC18	Baghouse VS18	N/A	N/A
C45	SCF160*	SCREW CONV. FEEDER	N/A		N/A	N/A
C45	SCF260*	SCREW CONV. FEEDER	N/A		N/A	N/A
C45	SCR17*	SCREENER	PVC45AC18	Baghouse VS18	N/A	N/A
C45	SM109*	SCREW CONV. MIXER	PVC45AC140A	Carbon Adsorber CA140	N/A	N/A
C45	SM153	SCREW CONVEYOR MIXER	PVC45SM153	Vent Sock VS153	N/A	N/A
C45	TK2A*	AMYL & WATER TK	N/A		50	Gallons
C45	TK8A*	PRODUCTION TK EV 202	PVC45ATK008A		3,000	Gallons
C45	TK8B*	PRODUCTION TK EV 202	PVC45ATK008B		3,000	Gallons
C45	TK8C*	RINSE WATER TANK	PVC45ATK008C		3,000	Gallons
C45	TK8D*	RINSE WATER TANK	PVC45ATK008D		3,000	Gallons
C45	TK8E*	RINSE WATER TANK	PVC45ATK008E		3,000	Gallons
C45	TK8F*	CLEANING SOLUTION	PVC45ATK008F		100	Gallons
C45	TK14A*	PROCESS TANK	PVC45TK14A		1,000	Gallons

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
C45	TK14B*	EVAP. TANK FOR COL 202	PVC45TK14B		1,000	Gallons
C45	TK14C*	PROCESS TANK	N/A		1,000	Gallons
C45	TK14D*	PROCESS TANK	PVC45TK14D		1,000	Gallons
C45	TK18A*	PRODUCTION TANK	PVC45TK18A		1,300	Gallons
C45	TK20*	PRODUCTION TANK	PVC45TK020		300	Gallons
C45	TK21*	SODIUM SLURRY TANK	PVC45AC140A	Carbon Adsorber CA140	1,100	Gallons
C45	TK22*	SODIUM SLURRY TANK	PVC45AC140A	Carbon Adsorber CA140	1,100	Gallons
C45	TK25*	CRYSTALS	PVC45AC140A	Carbon Adsorber CA140	500	Gallons
C45	TK107*	SOLVENT STORAGE TK	N/A		400	Gallons
C45	TK108B*	EVAP. TANK FOR EV 108	N/A		68	Gallons
C45	TK109A*	AMYL & WATER	N/A		300	Gallons
C45	TK109C*	PRODUCTION TANK	PVC45HE109C		432	Gallons
C45	TK114A*	CENTRIFUGE TANK	PVC45AC140A	Carbon Adsorber CA140	470	Gallons
C45	TK114B*	CENTRIFUGE TANK	PVC45AC140A	Carbon Adsorber CA140	470	Gallons
C45A	TK147/VS147*	STORAGE TANK	PVC45AAC147		50	tons
C45A	TK148/VS148*	STORAGE TANK	PVC45AAC148		50	tons
C45	TK149/VS150C*	STORAGE TANK	PVC45AAC149		16,638	kg
C45	TK151	STORAGE TANK	PVC45TK151	Vent Sock VS151A	N/A	N/A
C45	TK152*	MATERIAL HANDLING	PVC45TK152	Vent Sock VS152	N/AV	N/AV
C45	TK153*	MATERIAL HANDLING	PVC45TK153	Vent Sock VS153A	N/AV	N/AV
C45	TK201*	DECANTER FOR COL201	PVC45TK201		3,000	Gallons
C45	TK202C*	PROD. TK FOR EV202	N/A		450	Gallons
C45	TK204*	DECANTER FOR COL204	PVC45TK204		N/A	N/A
C45	TK219*	DECANTER FOR COL219	PVC45TK219		N/A	N/A
C45	TK350B*	STRIPPER FEED TANK	PVC45TK350B		20,834	Gallons
C45	TK360B*	STRIPPER FEED TANK	PVC45TK360B		20,834	Gallons
C45	TK361B*	STRIPPER FEED TANK	PVC45TK361B		20,834	Gallons
C45	TK350A*	DECANTER	PVC45TK350A		20,834	Gallons
C45	TK360A*	DECANTER	PVC45TK360A		38,265	Gallons
C45	TK361A*	DECANTER	PVC45TK361A		38,265	Gallons
C45	TK380*	CLEANING SOLUTION TANK	PVC45TK380		15,000	Gallons
C45	TK381*	CLEANING SOLUTION TANK	PVC45TK381		15,000	Gallons
C45A	TK435U*	GLYCOL RECYCLE TANK	N/A		750	Gallons
C45A	TK490A*	WASTE TANK	PVC45ATK490A		3,500	Gallons
C45A	TK490B*	WASTE TANK	PVC45ATK490B		450	Gallons
C45	VS17*	VACUUM CLEANING BAGHOUSE	PVC45AC17		N/A	N/A
C45	VS172*	TRANSFER BAGHOUSE	PVC45AC172		N/A	N/A
C45	VS107A*	TRANSFER BAGHOUSE	PVC45AC107		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.

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]

Pursuant to 326 IAC 8-1-6 [Best Available Control Technology (BACT)] and CP 165-1966, the VOC emissions from BL410, CENT401B, CENT401C, COS401D, COS420A, COS420L, COS421A, COS421L, D420, D421, EV450, SM410A, TK401, TK401G, TK450A, VS400, VS420B, VS421B, VS480A, and VS480B shall be controlled by a carbon adsorber (CA460) with emissions limited to 2.85 pounds per hour.

The Permittee shall demonstrate compliance with the VOC emissions limit either on an hourly rolling average basis or on the one-hour block average.

D.3.3 NSPS Subpart Kb [326 IAC 12]

Pursuant to 326 IAC 12, the storage tanks TK350C, TK350D, TK360C, TK361C, TK370A and TK370B are subject to the applicable requirements of the NSPS Subpart Kb, as published July 1, 2000. However, pursuant to 40 CFR 60.110b(b), these tanks are exempt from the General Provisions (40 CFR Part 60, Subpart A) and from the provisions of this subpart, with the exception of the requirements in 40 CFR 60.116b(a) and (b). The record keeping requirements of 40 CFR 60.116b(a) and (b) are specified in Condition D.3.8. This requirement is not federally enforceable, and it expires when the October 15, 2003 amendments to Subpart Kb are incorporated into 326 IAC 12.

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 Leak Detection and Repair [CP 165-1966]

Leak detection and repair shall be done on all pumps, flanges, and valves in Building C45A as specified in the Permittee's proposal submitted to IDEM on June 22, 1992. All in service pumps and valves shall be monitored initially on a monthly basis. All flanges shall be monitored initially on a quarterly basis. All leaks shall be repaired the first time the equipment is off line long enough to complete the repair, and the permittee will attempt to make repairs no later than five days after the leak is detected.

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 Carbon Adsorber CA460 Monitoring

The Permittee shall determine outlet emissions from the carbon adsorber CA460 by mass balance calculations, or direct measurement (e.g., flame ionization detector).

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 determination required by Condition D.3.7.

(b) A record of the storage tank capacity and dimensions for tanks TK350C, TK350D, TK360C, TK361C, TK370A and TK370B, shall be readily accessible and kept for the life of the vessel. This requirement is not federally enforceable, and it expires when the October 15, 2003 amendments to 40 CFR Part 60, Subpart Kb are incorporated into 326 IAC 12.

D.3.9 Notification Requirements [326 IAC 12]

(a) The Permittee shall notify IDEM, OAQ within 30 days when the maximum true vapor pressure of the liquids in TK350C, TK350D, TK360C, TK361C, TK370A or TK370B exceeds 27.6 kPa.

(b) The notification shall be submitted to the address listed in Section C, Condition C.19 - General Reporting Requirements, of this permit. The notification is not required to be certified by the responsible official.

(c) This condition is not federally enforceable, and it expires when the October 15, 2003 amendments to 40 CFR Part 60, Subpart Kb are incorporated into 326 IAC 12.

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: Advance Approval of Permit Conditions

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

SECTION D.4 AHM – PRODUCT FINISHING OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in these facility description boxes is descriptive information and does not constitute enforceable conditions.

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

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
C47	BAG185*	BAGGER	PVC58AC190	Baghouse VS183, Carbon Adsorber CA190**	N/A	N/A
C47E	BAG813*	BAGGER	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47E	BL808A*	BLENDER	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	1,000	Cubic Ft.
C47E	BL808B*	BLENDER	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	1,000	Cubic Ft.
C47E	BL809A*	BLENDER	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	1,000	Cubic Ft.
C47E	BL809B*	BLENDER	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	1,000	Cubic Ft.
C47E	BL811A*	BLENDER MIXER	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	1,000	Cubic Ft.
C47E	BL811B*	BLENDER MIXER	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	1,000	Cubic Ft.
C47E	BS812*	BAG SLITTER	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	BS812A*	MANUAL REFEED HOPPER	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/AV	N/AV
C47B	COD480*	DRAG CONVEYOR	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47B	COD481*	DRAG CONVEYOR	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47B	COD490*	DRAG CONVEYOR	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47B	COD491*	DRAG CONVEYOR	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47	COE185*	BUCKET ELEVATOR	PVC58AC190	Baghouse VS183, Carbon Adsorber CA190**	N/A	N/A
C47B	COE440*	BUCKET ELEVATOR	PVC59AC520	Baghouse VS470, Carbon Adsorber CA520**	13,200	lb/hr
C47B	COE440A*	BUCKET ELEVATOR	PVC59AC520	Baghouse VS460, Carbon Adsorber CA520**	N/A	N/A
C47B	COE450*	BUCKET ELEVATOR	PVC59AC520	Baghouse VS460, Carbon Adsorber CA520**	N/A	N/A
C47B	COE451*	BUCKET ELEVATOR	PVC59AC520	Baghouse VS460, Carbon Adsorber CA520**	N/A	N/A
C47E	COE805*	BUCKET ELEVATOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COE807*	BUCKET ELEVATOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47	COS185*	SCREW CONVEYOR	PVC58AC190	Baghouse VS183, Carbon Adsorber CA190**	N/A	N/A
C47E	COS458*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS805A*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS805B*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS805C*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS805D*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS806A*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon	N/A	N/A

				Adsorber CA520**		
C47E	COS806B*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS806C*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS806D*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS807*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS807A*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS808*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS809*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	COS810A*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	COS810B*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	COS810C*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	COS810D*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	COS810E*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	COS811A*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47E	COS811B*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47E	COS811C*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47E	COS812A*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	COS812B*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	COS813*	SCREW CONVEYOR	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47	CY006*	CYCLONE SEPARATOR	PVC58AC190	Baghouse VS18, Carbon Adsorber CA190**	N/A	N/A
C47	CY008*	CYCLONE SEPARATOR	PVC58AC190	Baghouse VS17, Carbon Adsorber CA190**	N/A	N/A
C47B	CY461*	CYCLONE SEPARATOR	PVC59AC520	Baghouse VS460, Carbon Adsorber CA520**	N/A	N/A
C47B	CY462*	CYCLONE SEPARATOR	PVC59AC520	Baghouse VS460, Carbon Adsorber CA520**	N/A	N/A
C47B	CY471*	CYCLONE SEPARATOR	PVC59AC520	Baghouse VS470, Carbon Adsorber CA520**	660	lb/hr
C47B	DS470*	TOTE BAG DRUM STATION	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47E	DS811*	TOTE BAG DRUM STATION	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47E	H101	HOPPER	PVC47EH101	Vent Sock H101SOCK	N/A	N/A
C47E	H102	HOPPER	PVC47EH102	Vent Sock H102SOCK	N/A	N/A
C47E	H103	HOPPER	PVC47EH103	Vent Sock H103SOCK	N/A	N/A
C47	H180	HOPPER	PVC47H180	Vent Sock H180SOCK	N/A	N/A
C47B	H410*	HOPPER	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	H431*	HOPPER	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47E	H807*	HOPPER	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	H807A*	HOPPER	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	H812*	HOPPER	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	60	Cubic Ft.
C47E	H813C*	HOPPER	PVC59AC520	Baghouse VS815B, Carbon	N/A	N/A

				Adsorber CA520**		
C47	PC006*	PELLET COOLER	PVC58AC190	Baghouse VS7, Carbon Adsorber CA190**	N/A	N/A
C47B	PC430*	PELLET COOLER	PVC59AC520	Baghouse VS430A, Carbon Adsorber CA520**	N/A	N/A
C47	PEL006*	PELLET MILL	PVC58AC190	Baghouse VS7, Carbon Adsorber CA190**	N/A	N/A
C47B	PEL430*	PELLET MILL	PVC59AC520	Baghouse VS430A, Carbon Adsorber CA520**	N/A	N/A
C47B	RM440*	ROLLER MILL	PVC59AC520	Baghouse VS470, Carbon Adsorber CA520**	N/A	N/A
C47B	RM440A*	ROLLER MILL	PVC59AC520	Baghouse VS470, Carbon Adsorber CA520**	N/A	N/A
C47B	RM480*	ROLLER MILL	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47B	RM481*	ROLLER MILL	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47B	SCR450*	SCREENER	PVC59AC520	Baghouse VS460, Carbon Adsorber CA520**	N/A	N/A
C47B	SCR451*	SCREENER	PVC59AC520	Baghouse VS460, Carbon Adsorber CA520**	N/A	N/A
C47E	SCR813*	SCREENER	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47B	SCR490*	SCREENER	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47B	SCR491*	SCREENER	PVC59AC520	Baghouse VS480, Carbon Adsorber CA520**	N/A	N/A
C47	SM182*	RIBBON MIXER	PVC58AC190	Baghouse VS183, Carbon Adsorber CA190**	1,000	Cubic Ft.
C47	SM280	SCREW MIXER	PVC47SM280	Vent Sock SM280SOCK	N/A	N/A
C47	TB185*	TOTE BAGGER	PVC58AC190	Baghouse VS183, Carbon Adsorber CA190**	N/A	N/A
C47E	TB813*	TOTE BAG FILLER	PVC59AC520	Baghouse VS815B, Carbon Adsorber CA520**	N/A	N/A
C47E	TK101A	STORAGE TANK	PVC47ETK101A	Vent Sock TK101ASOCK	1,900	Cubic Ft.
C47E	TK101B	STORAGE TANK	PVC47ETK101B	Vent Sock TK101BSOCK	1,900	Cubic Ft.
C47E	TK102A	STORAGE TANK	PVC47ETK102A	Vent Sock TK102ASOCK	N/A	N/A
C47E	TK102B	STORAGE TANK	PVC47ETK102B	Vent Sock TK102BSOCK	N/A	N/A
C47E	TK103	STORAGE TANK	PVC47EVS103A	Baghouse VS103**	1,900	Cubic Ft.
C47	TK11A*	STORAGE TANK	PVC47TK11A	Vent Sock TK11ASOCK**	2,000	Cubic Ft.
C47	TK11B*	STORAGE TANK	PVC47TK11B	Vent Sock TK11BSOCK**	2,000	Cubic Ft.
C47	TK132*	MINERAL OIL TANK	PVC47TK132		31,087	Gallons
C47	TK181	STORAGE TANK	PVC47TK181	Vent Sock TK181SOCK	1,897	Cubic Ft.
C47	TK201A	SILO	PVC47AC201	Vent Sock TK201ASOCK**	1,900	Cubic Ft.
C47	TK201B	SILO	PVC47AC201	Vent Sock TK201BSOCK**	1,900	Cubic Ft.
C47	TK270	SILO	PVC47TK270	Vent Sock TK270SOCK	N/AV	N/AV
C47B	TK420	STORAGE TANK	PVC47BVS420	Baghouse VS420**	1,900	Cubic Ft.
C47E	TK806A*	STORAGE TANK	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	2,000	Cubic Ft.
C47E	TK806B*	STORAGE TANK	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	2,000	Cubic Ft.
C47E	TK806C*	STORAGE TANK	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	2,000	Cubic Ft.
C47E	TK806D*	STORAGE TANK	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	2,000	Cubic Ft.
C47	VS001	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47	VS010	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47	VS017	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47	VS018	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A

C47	VS180	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47	VS182	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47	VS183	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47	VS201*	TRANSFER BAGHOUSE	PVC47AC201		N/A	N/A
C47	VS210*	TRANSFER BAGHOUSE	PVC47AC210		N/A	N/A
C47	VS004	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47	VS400	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	VS410	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	VS430	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	VS430A	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	VS431	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	VS460	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	VS470	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47B	VS480	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47	VS007	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	N/A	N/A
C47E	VS810A*	TRANSFER BAGHOUSE	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	VS810B*	TRANSFER BAGHOUSE	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	VS810C*	TRANSFER BAGHOUSE	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	VS812*	TRANSFER BAGHOUSE	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	N/A	N/A
C47E	VS815A	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47E	VS815B	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47E	VS815C	TRANSFER BAGHOUSE	PVC59AC520	Carbon Adsorber CA520**	N/A	N/A
C47E	WB805	WEIGH BELT	PVC59AC520	Baghouse VS815A, Carbon Adsorber CA520**	N/A	N/A
C47E	WH810A*	WEIGH HOPPER	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	500	Cubic Ft.
C47E	WH810B*	WEIGH HOPPER	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	250	Cubic Ft.
C47E	WH810C*	WEIGH HOPPER	PVC59AC520	Baghouse VS815C, Carbon Adsorber CA520**	500	Cubic Ft.
C47C	VS601	TRANSFER BAGHOUSE (Transfer Cycle)	PVC58AC190	Carbon Adsorber CA190**	37	kg/min
C47C	VS602	TRANSFER BAGHOUSE (Transfer Cycle)	PVC58AC190	Carbon Adsorber CA190**	159	kg/min
		TRANSFER BAGHOUSE (Mix Cycle)			159	
C47C	VS603	TRANSFER BAGHOUSE	PVC58AC190	Carbon Adsorber CA190**	159	kg/min
C47C	BS612	BAG SLITTER	PVC58AC190	Carbon Adsorber CA190**	131	kg/min
C47C	FD603	FEEDER	PVC58AC190	Baghouse VS609**, Carbon Adsorber CA190**	119	kg/min
C47C	FD605	FEEDER	PVC58AC190	Baghouse VS609**, Carbon Adsorber CA190**	12	kg/min
C47C	TK610	TANK	PVC58AC190	Baghouse VS609**, Carbon Adsorber CA190**	205.5	kg/min
C47C	TK612	TANK	PVC58AC190	Baghouse VS609**, Carbon Adsorber CA190**	262	kg/min
C47C	BAG612	BAGGER	PVC58AC190	Baghouse VS609**, Carbon Adsorber CA190**	131	kg/min
C47C	FD604	FEEDER	PVC58AC190	Baghouse VS609**	38	kg/min
C47C	FD606*	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.

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

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
C47	COS001*	SCREW CONVEYOR	N/A		N/A	N/A
C47E	COS101*	SCREW CONVEYOR	N/A		N/A	N/A
C47E	COS101A*	SCREW CONVEYOR	N/A		N/A	N/A
C47E	COS101B*	SCREW CONVEYOR	N/A		N/A	N/A
C47E	COS102*	SCREW CONVEYOR	N/A		N/A	N/A
C47E	COS102A*	SCREW CONVEYOR	N/A		N/A	N/A
C47E	COS102B*	SCREW CONVEYOR	N/A		N/A	N/A
C47E	COS103*	SCREW CONVEYOR	N/A		N/A	N/A
C47	COS250A*	SCREW CONVEYOR	PVC47AC005B	Baghouse VS005B	N/A	N/A
C47	D250*	FLUIDIZED BED DRY	PVC47AC005B	Baghouse VS005B	N/A	N/A
C47	H012*	HOPPER	N/A		N/A	N/A
C47	H002*	HOPPER	N/A		N/A	N/A
C47	H201*	HOPPER	N/A		N/A	N/A
C47	H208*	HOPPER	PVC47AC005B	Baghouse VS005B	N/A	N/A
C47	H270*	HOPPER	N/A		N/A	N/A
C47	H003*	HOPPER	N/A		N/A	N/A
C47	HM006*	HAMMER MILL	N/A		N/A	N/A
C47	HM008*	HAMMER MILL	N/A		N/A	N/A
C47	HM250*	HAMMER MILL	PVC47AC005B	Baghouse VS005B	N/A	N/A
C47	SCR006*	SCREENER	N/A		N/A	N/A
C47	SM210A*	RIBBON MIXER	PVC47AC005B	Baghouse VS005B	N/A	N/A
C47	SM210B*	RIBBON MIXER	PVC47AC005B	Baghouse VS005B	N/A	N/A
C47	SS250*	SCREENERS	PVC47AC005B	Baghouse VS005B	N/A	N/A
C47	SUMP003*	WASTE SUMP	N/A		4,283	Gallons
C47	TK001A*	STORAGE TANK	PVC47TK1A	Vent Sock TK1ASOCK	2,009	Cubic Ft.
C47	TK001B*	STORAGE TANK	PVC47TK1B	Vent Sock TK1BSOCK	1,850	Cubic Ft.
C47	TK002*	STORAGE TANK	N/A		80	Tons
C47	TK180*	STORAGE TANK	N/A		N/A	N/A
C47	TK310*	RUBBER LINED TANK	PVC47TK310		500	Gallons
C47E	TK320*	LIQUID WASTE TANK	PVC47TK320		2,400	Gallons
C47	TK320A*	TYLOSIN WASTEWATER TANK	PVC47TK320A		175	Gallons
C47	TK330*	JACKETED TANK	PVC47 TK330		22,000	Gallons
C47	TK340*	TYLOSIN HOT WATER TANK	PVC47TK340		200	Gallons
C47B	TK410A*	STORAGE TANK	N/A		36	Tons
C47B	TK410B*	STORAGE TANK	N/A		36	Tons
C47B	TK453*	WASTE SUMP, PROC. WATER	PVC47TK453		1,000	Gallons
C47	TK006*	TRANSFER TANK	N/A		N/A	N/A
C47E	TK803*	VEGETABLE OIL TANK	N/A		8,000	Gallons
C47E	TK803A*	VEGETABLE OIL TANK	PVC47ETK803A		125	Gallons
C47E	TK804A*	MINERAL OIL TANK	PVC47ETK804A		125	Gallons
C47	VS005B*	TRANSFER BAGHOUSE	PVC47AC005B		N/A	N/A

C47	VS011*	TRANSFER BAGHOUSE	PVC47AC11		N/A	N/A
C47E	VS101*	TRANSFER BAGHOUSE	PVC47EAC101A		N/A	N/A
C47E	VS102*	TRANSFER BAGHOUSE	PVC47EAC102A		N/A	N/A
C47	VS013*	VACUUM CLEANING BAGHOUSE	PVC47AC13		N/A	N/A
C47	VS170A*	VACUUM CLEANING BAGHOUSE	PVC47AC170A		N/A	N/A
C47	VS220*	TRANSFER BAGHOUSE	PVC47AC220		N/A	N/A
C47	VS270*	TRANSFER BAGHOUSE	PVC47AC270		N/A	N/A
C47	VS280*	TRANSFER BAGHOUSE	PVC47AC280		N/A	N/A
C47	VS285*	TRANSFER BAGHOUSE	PVC47AC285		N/A	N/A
C47B	VS510*	VACUUM CLEANING BAGHOUSE	PVC47BAC510		N/A	N/A
C47E	VS815D*	VACUUM CLEANING BAGHOUSE	PVC47EAC815D		N/A	N/A
C47C	VS617*	VACUUM CLEANING BAGHOUSE	PVC47CAC617		NA	NA
C47C	BL601A*	BLENDING SILO (Transfer Cycle)	PVC47CBL601A		37	kg/min
C47C	BL601B*	BLENDING SILO (Transfer Cycle)	PVC47CBL601B		37	kg/min
C47C	BL602A*	BLENDING SILO (Transfer Cycle)	PVC47CBL602A		159	kg/min
		BLENDING SILO (Mix Cycle)			159	
C47C	BL602B*	BLENDING SILO (Transfer Cycle)	PVC47CBL602B		159	kg/min
		BLENDING SILO (Mix Cycle)			159	
C47C	VS604*	TRANSFER BAGHOUSE	PVC47CC604		50	kg/min
C47C	BS606	BAG SLITTER	PVC47CBS606		47	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.

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

Condition Subpart	Unit ID	Stack/Vent ID	Maximum Process Weight Rate (tons/hr)	Emissions Limitation (lb/hr)
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

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-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.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.

D.4.7 Visible Emissions Observations [326 IAC 2-1.1-11]

The Permittee shall visually observe the emissions from TK103 exhaust while it is operating at least once per day. TK103 is considered to be operating only when raw materials are being unloaded into the tank. If abnormal emissions are observed, the Permittee shall follow the Compliance Response Plan as required by Condition C.15.

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

D.4.8 Record Keeping Requirements

(a) The Permittee shall maintain records of the continuous monitoring required by Condition D.4.6. The records shall include the data required by 326 IAC 3-5-6.

(b) The Permittee shall maintain records of the visible emissions observations required by Condition D.4.7.

(c) 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) **Reserved**

D.4.9 Reporting Requirements

(a) **Reserved.**

(b) The Permittee shall prepare and submit a written report of excess emissions of the continuous emissions monitors each calendar quarter. The report must contain the information required by 326 IAC 3-5-7(4).

D.4.10 **Reserved**

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

D.4.11 Modifications and Construction: Advance Approval of Permit Conditions

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

SECTION D.5 BULK PHARMACEUTICAL MANUFACTURING (BPM) PRODUCTION OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in the facility description boxes is descriptive information and does not constitute enforceable conditions:

The Permittee permanently shut down the emission units listed in Section D.5

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
Building C3:				
CENT50	Heinkel Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT51	Heinkel Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT52	Heinkel Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT53	Heinkel Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
TK10	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK11	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO*
TK16	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO*
TK20	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK203	Process Tank (H_2O)	N/A	3,000 gal	N/A
TK22	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK3	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK4	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK50A	Process Tank	PVC70A/BSCBR1/2	50 gal	RTO
TK50B	Receiver	PVC70A/BSCBR1/2	50 gal	RTO
TK51A	Receiver	PVC70A/BSCBR1/2	50 gal	RTO
TK51B	Receiver	PVC70A/BSCBR1/2	50 gal	RTO
TK52A	Receiver	PVC70A/BSCBR1/2	50 gal	RTO
TK53A	Receiver	PVC70A/BSCBR1/2	50 gal	RTO
TK77	Charge Tank	PVC70A/BSCBR1/2	100 gal	RTO
TK78	Charge Tank	PVC70A/BSCBR1/2	100 gal	RTO
TK8	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK81	Process Tank	PVC70A/BSCBR1/2	500 gal	RTO
TK85	Process Tank	PVC70A/BSCBR1/2	500 gal	RTO
TK9	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK97	Process Tank	PVC70A/BSCBR1/2	750 gal	RTO
Building C13:				
CENT71	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT72A	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT72B	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT72C	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT73A	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT73B	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT73C	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT74	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO

CENT75A	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT75B	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
CENT75C	Centrifuge	PVC70A/BSCBR1/2	N/A	RTO
TK1	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK10	Process Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK11	Caustic Tank	PVC13TK11	1,000 gal	RTO*
TK2	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK21	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
TK22	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK23	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK24	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK25	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK26	Process Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK27	Process Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK28	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK28A	Process Tank	PVC70A/BSCBR1/2	500 gal	RTO
TK29	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK3	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK3A	Charge Tank	PVC70A/BSCBR1/2	200 gal	RTO
TK30	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK302	Charge Tank	PVC70A/BSCBR1/2	500 gal	RTO
TK31	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK314	Phosphoric Acid Storage Tank	N/A	300 gal	N/A
TK32	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK33	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK34	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK35	Process Tank	N/A	4,000 gal	N/A
TK37	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO*
TK38	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO*
TK4	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK410	Water Tank	N/A	4,000 gal	N/A
TK5	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
TK59	Condensate Tank (H_2O)	NA	200 gal	NA
TK6A	Process Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK6B	Process Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK71B	Filtrate Tank	PVC70A/BSCBR1/2	100 gal	RTO
TK7A	Charge Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK7B	Charge Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK8	Slurry Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
TK9	Process Tank	PVC70A/BSCBR1/2	1,000 gal	RTO
Building C13A:				
RVD1	Rotary Vacuum Dryer	PVC70A/BSCBR1/2	170 cu ft	RTO
RVD2	Rotary Vacuum Dryer	PVC70A/BSCBR1/2	170 cu ft	RTO
RVD3	Rotary Vacuum Dryer	PVC70A/BSCBR1/2	170 cu ft	RTO
RVD4	Rotary Vacuum Dryer	PVC70A/BSCBR1/2	170 cu ft	RTO
RVD5	Rotary Vacuum Dryer	PVC70A/BSCBR1/2	165 cu ft	RTO

RVD6	Rotary Vacuum Dryer	PVC70A/BSCBR1/2	170 cu ft	RTO
RVD8	Rotary Vacuum Dryer	PVC70A/BSCBR1/2	170 cu ft	RTO
TK1B	Distillate Tank	PVC70A/BSCBR1/2	100 gal	RTO
TK3B	Distillate Pot	PVC70A/BSCBR1/2	100 gal	RTO
TK4B	Distillate Pot	PVC70A/BSCBR1/2	150 gal	RTO
TK5B	Distillate Pot	PVC70A/BSCBR1/2	100 gal	RTO
TK6B	Distillate Pot	PVC70A/BSCBR1/2	100 gal	RTO
TK8B	Distillate Tank	PVC70A/BSCBR1/2	150 gal	RTO
*This equipment is currently not connected to the RTO but is not in service. However, this equipment shall be tied into the RTO control system prior to emitting VOC/VOHAP greater than the control threshold.				

Emission Limitations and Standards

D.5.1 through D.5.5 **Reserved**

Testing and Monitoring Requirements

D.5.6 **Reserved**

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

D.5.7 Record Keeping Requirements

(a) Record Keeping Requirements

(1) RTO Control System Records - The record keeping requirements for the RTO control system, and associated closed-vent system, used to control emissions from the emission units listed in this section are described in Section D.11 of this permit.

(2) **Reserved**

(3) **Reserved**

(4) LDAR Records - The record keeping requirements for the LDAR standards are described in Sections E.1 and E.2 of this permit.

(5) SSM Records - The Permittee shall maintain the following records from October 1, 2004 to the date on which BPM production buildings were disconnected from the fume transport system going to the RTO:

(A) Records of the current and superseded versions of SSM Plan.

(B) Occurrence/duration records of each process malfunction.

(C) Information to demonstrate conformance with each SSM are consistent with the procedures in the SSM Plan.

(D) Records of actions taken during each SSM when different from SSM Plan.

SECTION D.6 BPM SUPPORT OPERATIONS – SOLVENT RECOVERY OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in the facility description boxes is descriptive information and does not constitute enforceable conditions:

The Permittee permanently shut down the emission units that were listed in Section D.6.

Ancillary activities, such as heat exchange systems, are not considered process vents and have not been included in the description tables.

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
Building 63/63A:				
C63-COL-06	Column	PVC70A/BSCBR1/2	1,619 gal	RTO
C63-COL-100	Pilot Column	PVC70A/BSCBR1/2	200 gal	RTO*
C63-COL-101	Distillation Column	PVC70A/BSCBR1/2	6,358 gal	RTO
C63-COL-103	Column	PVC70A/BSCBR1/2	5,454 gal	RTO
C63-COL-105	Column	PVC70A/BSCBR1/2	4,000 gal	RTO
C63-COL-107	Column	PVC70A/BSCBR1/2	5,764 gal	RTO
C63-EV-03	Evaporator	PVC70A/BSCBR1/2	4,000 gal	RTO
C63-EV-04	Evaporator	PVC70A/BSCBR1/2	3,000 gal	RTO
C63-EV-05	Evaporator	PVC70A/BSCBR1/2	4,000 gal	RTO
C63-EV-11	Evaporator	PVC70A/BSCBR1/2	3,000 gal	RTO
C63-EV-15	Evaporator	PVC70A/BSCBR1/2	750 gal	RTO
C63-EXT-17	Extractor	PVC70A/BSCBR1/2	275 gal	RTO
C63-EXT-19	Extractor	PVC70A/BSCBR1/2	1,000 gal	RTO
C63-TK-01A	pH Tank	PVC70A/BSCBR1/2	500 gal	RTO
C63-TK-01B	pH Tank	PVC70A/BSCBR1/2	500 gal	RTO
C63-TK-03P	Decanter Tank	PVC70A/BSCBR1/2	500 gal	RTO
C63-TK-06D	Vacuum Pot	PVC70A/BSCBR1/2	60 gal	RTO
C63-TK-07A	Multipurpose	PVC70A/BSCBR1/2	1,500 gal	RTO
C63-TK-07B	Process Tank	PVC70A/BSCBR1/2	1,500 gal	RTO
C63-TK-08A	Process Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
C63-TK-100A	Feed Tank	PVC70A/BSCBR1/2	250 gal	RTO*
C63-TK-100B	Hold Tank	PVC70A/BSCBR1/2	50 gal	RTO*
C63-TK-100C	Hold Tank	PVC70A/BSCBR1/2	50 gal	RTO*
C63-TK-100D	Hold Tank	PVC70A/BSCBR1/2	50 gal	RTO*
C63-TK-100E	Overheads Tank	PVC70A/BSCBR1/2	150 gal	RTO*
C63-TK-100F	Sidedraw Tank	PVC70A/BSCBR1/2	150 gal	RTO*
C63-TK-100G	Bottoms Tank	PVC70A/BSCBR1/2	150 gal	RTO*
C63-TK-101A	Overheads Tank	PVC70A/BSCBR1/2	300 gal	RTO
C63-TK-101C	Sidedraw Tank	PVC70A/BSCBR1/2	100 gal	RTO
C63-TK-103P	Process Tank	PVC70A/BSCBR1/2	300 gal	RTO
C63-TK-103S	Process Tank	PVC70A/BSCBR1/2	50 gal	RTO
C63-TK-105P	Process Tank	PVC70A/BSCBR1/2	400 gal	RTO
C63-TK-107P	Process Tank	PVC70A/BSCBR1/2	400 gal	RTO

C63-TK-107Q	Process Tank	PVC70A/BSCBR1/2	76 gal	RTO
C63-TK-10A	Process Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
C63-TK-15P	Process Tank	PVC70A/BSCBR1/2	400 gal	RTO
C63-TK-17P	Process Tank	PVC70A/BSCBR1/2	50 gal	RTO
C63-TK-17S	Process Tank	PVC70A/BSCBR1/2	400 gal	RTO
C63-TK-19P	Process Tank	PVC70A/BSCBR1/2	50 gal	RTO
C63-TK-9A	Make-up Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
C63-TK-9AA	Process Tank	PVC70A/BSCBR1/2	70 gal	RTO
* This equipment is currently not connected to the RTO but is not in service. However, this equipment shall be tied into the RTO control system prior to startup.				

Emission Limitations and Standards

D.6.1 through D.6.5 **Reserved**

Testing and Monitoring Requirements

D.6.6 **Reserved**

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

D.6.7 Record Keeping Requirements

(a) Record Keeping Requirements

(1) RTO Control System Records - The record keeping requirements for the RTO control system, and associated closed-vent system, used to control emissions from the emission units listed in this section are described in Section D.11 of this permit.

(2) LDAR Records - The record keeping requirements for the LDAR standards are described in Sections E.1 and E.2 of this permit.

(3) **Reserved**

(4) **Reserved**

(5) Heat Exchange System Records – The Permittee shall maintain the following records from October 1, 2004 to the date on which BPM solvent recovery buildings were disconnected from the fume transport system going to the RTO for heat exchange systems that use water to cool process equipment or materials used in pharmaceutical manufacturing operations:

(A) A copy of the Heat Exchanger Monitoring Plan.

(B) **Reserved**

(C) **Reserved**

(D) **Reserved**

(E) **Reserved**

(F) The Permittee shall track the heat exchange systems that use water to cool process equipment or materials used in pharmaceutical

manufacturing operations in an operating scenario maintained in the On-Site Implementation Log (OSIL).

(6) SSM Records - The Permittee shall maintain the following records from October 1, 2004 to the date on which BPM solvent recovery buildings were disconnected from the fume transport system going to the RTO:

(A) Records of the current and superseded versions of SSM Plan.

(B) Occurrence/duration records of each process malfunction.

(C) Information to demonstrate conformance with each SSM are consistent with the procedures in the SSM Plan.

(D) Records of actions taken during each SSM when different from SSM Plan.

SECTION D.7 BPM SUPPORT OPERATIONS – SOLVENT STORAGE TANK CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The following information is descriptive information and does not constitute enforceable conditions:

The Permittee permanently shut down the emission units that were listed in Section D.7.

The information describing the processes contained in the following facility description boxes is descriptive information and does not constitute enforceable conditions:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
Miscellaneous Storage Areas:				
C64-TK-3	Solvent Tank	PVC70A/BSCBR1/2	20,000 gal	RTO*
C64-TK-99	Solvent Tank	PVC70A/BSCBR1/2	10,000 gal	RTO*
C96-TK-1	Solvent Tank	PVC70A/BSCBR1/2	10,000 gal	RTO
Building C13:				
C13-TK-102	Heat Transfer Media Tank	PVC70A/BSCBR1/2	200 gal	RTO
C13-TK-103	Heat Transfer Media Tank	PVC70A/BSCBR1/2	200 gal	RTO
C13-TK-220	Heat Transfer Media Tank	PVC70A/BSCBR1/2	4,000 gal	RTO
C13-TK-309C	Heat Transfer Media Tank	PVC70A/BSCBR1/2	50 gal	RTO
Building C63:				
C63-TK-202	Solvent Tank	PVC70A/BSCBR1/2	5,000 gal	RTO
C63-TK-203	Solvent Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
C63-TK-204	Solvent Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
C63-TK-205	Solvent Tank	PVC70A/BSCBR1/2	5,000 gal	RTO
C63-TK-206	Solvent Tank	PVC70A/BSCBR1/2	2,000 gal	RTO
C63-TK-208	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
C63-TK-210	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
C63-TK-211	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
C63-TK-212	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
C63-TK-213	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
C63-TK-214	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
C63-TK-215	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
C63-TK-216	Solvent Tank	PVC70A/BSCBR1/2	8,000 gal	RTO
Building C64B – Tank Module:				
C64B-TK-161	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64B-TK-163	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO

C64B-TK-165	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64B-TK-167	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64B-TK-169	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64B-TK-171	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64B-TK-173	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64B-TK-175	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64B-TK-177	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
Building C64D – Tank Module:				
C64D-TK-136	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64D-TK-138	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64D-TK-140	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64D-TK-142	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64D-TK-144	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64D-TK-146	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64D-TK-148	Solvent Tank	PVC70A/BSCBR1/2	38,541 gal	RTO
C64D-TK-150	Solvent Tank	PVC70A/BSCBR1/2	38,541 gal	RTO
C64D-TK-152	Solvent Tank	PVC70A/BSCBR1/2	38,541 gal	RTO
C64D-TK-154	Solvent Tank	PVC70A/BSCBR1/2	38,541 gal	RTO
C64D-TK-156	Solvent Tank	PVC70A/BSCBR1/2	38,541 gal	RTO
Building C64E – Tank Module:				
C64E-TK-158	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64E-TK-160	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64E-TK-162	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64E-TK-164	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64E-TK-166	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64E-TK-168	Solvent Tank	PVC70A/BSCBR1/2	38,551 gal	RTO
C64E-TK-170	Solvent Tank	PVC70A/BSCBR1/2	38,186 gal	RTO
C64E-TK-172	Solvent Tank	PVC70A/BSCBR1/2	38,186 gal	RTO
C64E-TK-174	Solvent Tank	PVC70A/BSCBR1/2	38,186 gal	RTO
C64E-TK-176	Solvent Tank	PVC70A/BSCBR1/2	38,186 gal	RTO
C64E-TK-178	Solvent Tank	PVC70A/BSCBR1/2	38,186 gal	RTO
Building C64F – Tank Module:				
C64F-TK-201	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-202	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-203	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-204	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-205	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-206	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-207	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-208	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-209	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-210	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-211	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-212	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-213	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO

C64F-TK-214	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-215	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-216	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-217	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-218	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-219	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-220	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-221	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-222	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO
C64F-TK-223	Solvent Tank	PVC70A/BSCBR1/2	19,494 gal	RTO
C64F-TK-224	Solvent Tank	PVC70A/BSCBR1/2	38,016 gal	RTO

* This equipment is currently not connected to the RTO but is not in service. However, this equipment shall be tied into the RTO control system prior to storing a VOC or VOHAP.

Emission Limitations and Standards

D.7.1 through D.7.4 **Reserved**

Testing and Monitoring Requirements

D.7.5 **Reserved**

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3), 40 CFR 60.7, 40 CFR Part 60 Subpart Kb, and 40 CFR Part 63 Subpart GGG]

D.7.6 Record Keeping Requirements

(a) Record Keeping Requirements

(1) The record keeping requirements for the RTO control system, and associated closed-vent system, used to control emissions from the emission units listed in this section are described in Section D.11 of this permit.

(2) Inspection and Maintenance Records - The Permittee shall maintain the following records from October 1, 2004 to the date on which BPM solvent storage tanks were disconnected from the fume transport system going to the regenerative thermal oxidizers, of information and data related to Conditions D.7.1 and D.7.2 in T165-6462-00009, issued on October 1, 2004:

(A) Identification and explanation of all BPM solvent storage tanks unsafe to inspect, including a plan for when these tanks will be inspected;

(B) Identification and explanation of all BPM solvent storage tanks difficult to inspect, including a plan for when these tanks will be inspected;

(C) **Reserved**

(D) **Reserved**

(E) **Reserved**

(F) Periods of planned routine maintenance; and

(G) Records of BPM solvent storage tanks storing VOC/VOHAP with a vapor pressure less than 3.5 kPa.

(3) SSM Records - The Permittee shall maintain the following records from October 1, 2004 to the date on which BPM solvent storage tanks were disconnected from the fume transport system going to the regenerative thermal oxidizers:

(i) Records of the current and superseded versions of SSM Plan.

(ii) Occurrence/duration records of each process malfunction.

(iii) Information to demonstrate conformance with each SSM are consistent with the procedures in the SSM Plan.

(iv) Records of actions taken during each SSM when different from SSM Plan.

(4) LDAR Records - The record keeping requirements for the LDAR standards are described in Section E.1 of this permit.

(5) Storage Tank Records – Pursuant to New Source Performance Standard for Volatile Organic Liquid Storage Vessels [40 CFR 60.116b(a) and (b)], the Permittee shall until the date on which BPM solvent storage tanks were disconnected from the fume transport system going to the regenerative thermal oxidizers, keep readily accessible records of the dimensions and capacity for each BPM solvent storage tank.

(6) Operating Plan – Pursuant to 40 CFR 60.115b, the Permittee shall until the date on which BPM solvent storage tanks were disconnected from the fume transport system going to the regenerative thermal oxidizers, maintain a copy of the operating plan required by 40 CFR 60.113b for all tanks with design capacity greater than or equal to 75 cubic meters.

SECTION D.8 SUPPORT OPERATIONS – WASTE TANK CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in the following facility description boxes is descriptive information and does not constitute enforceable conditions:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
C9 Tank Farm:				
C9-TK-1	Waste Tank	PVC70A/BSCBR1/2	72,000 gal	RTO
C9-TK-2	Waste Tank	PVC70A/BSCBR1/2	72,000 gal	RTO
C9-TK-3	Waste Tank	PVC70A/BSCBR1/2	42,000 gal	RTO
C9-TK-4	Waste Tank	PVC70A/BSCBR1/2	42,000 gal	RTO
C9-TK-6A	Waste Tank	PVC9BTK6A	1,900 gal	N/A
C9-TK-9	Waste Tank	PVC70A/BSCBR1/2	72,000 gal	RTO
C9-TK-10	Waste Tank	PVC70A/BSCBR1/2	72,000 gal	RTO
C9-TK-11	Waste Tank	PVC70A/BSCBR1/2	10,000 gal	RTO
C9-TK-12	Waste Tank	PVC70A/BSCBR1/2	30,000 gal	RTO
C9-TK-13	Waste Tank	PVC70A/BSCBR1/2	30,000 gal	RTO
C9-TK-14	Waste Tank	PVC70A/BSCBR1/2	30,000 gal	RTO
C9-TK-15	Waste Tank	PVC70A/BSCBR1/2	30,000 gal	RTO
C9-TK-16	Waste Tank	PVC70A/BSCBR1/2	10,000 gal	RTO
C9-TK-17	Waste Tank	PVC70A/BSCBR1/2	10,000 gal	RTO
C9-TK-19	Waste Tank	PVC70A/BSCBR1/2	248,000 gal	RTO
C9-TK-20	Waste Tank	PVC70A/BSCBR1/2	376,000 gal	RTO

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

D.8.1 Standards for Waste Storage Tanks [40 CFR 63.1256(b), 40 CFR 63.685, 40 CFR 60.110b, and 326 IAC 2-2-3]

The following streamlined standards for waste storage tanks satisfy the requirements of the Pharmaceutical MACT Standards for wastewater tanks [40 CFR 63.1256(b)], Volatile Organic Liquid Storage Vessel Standards [40 CFR 60.110b], OSWRO MACT Standards for waste tanks [40 CFR 63.685], and PSD BACT requirements [326 IAC 2-2-3]:

(a) Definition Standards:

(1) A waste storage tank is defined as any waste management unit that is designed to contain an accumulation of affected wastewater or offsite waste material containing VOCs and/or VOHAP. Pressure vessels greater than 204.9 kPa without emissions to the atmosphere or vessels attached to motor vehicles are not waste storage tanks. For purposes of inspections in Condition D.8.1(c), waste storage tank includes any fixed roof, cover, and/or enclosure, and closed vent system section from the waste storage tank to the waste storage tank conservation vent.

(b) Operational Standards:

(1) The Permittee shall route the vapors from each operating waste storage tank through a closed-vent system to the RTO control system. The operation, inspection and maintenance requirements for the RTO control system, and

associated closed-vent system, used to control emissions from these emission units are described in Section D.11 of this permit.

(2) Waste storage tanks shall be of fixed-roof design.

(c) Inspection Standards:

(1) The Permittee shall conduct one-time Method 21 inspections on each new fixed roof waste storage tank not operated under negative pressure and not subject to LDAR within 150 days upon startup.

(2) The Permittee shall conduct semiannual visual inspections on the fixed roof and all openings of each waste storage tank for visible, audible, or olfactory indications of leaks.

(3) The Permittee shall initiate repair of any leak on a waste storage tank no later than 5 calendar days after identification, and complete the repair within 15 days after identification, unless:

(A) The repair is technically infeasible without a shutdown of an operation or process; or

(B) It is determined that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.

Repairs delayed due to either of the causes described in (A) or (B) shall be completed by the end of the next shutdown.

D.8.2 Exceptions to Standards for Waste Storage Tanks [40 CFR 63.1256(b), 40 CFR 63.685, and 326 IAC 2-2-3]

(a) The waste storage tanks less than 38 cubic meters are not subject to the standards established in Condition D.8.1(b) during periods of planned routine maintenance, as long as the planned routine maintenance activities do not exceed 240 hours per year.

(b) Waste storage tanks storing VOC/VOHAP with a vapor pressure less than 3.5 kPa and tanks with a capacity less than 40 cubic meters that are used to store wastewater with a vapor pressure less than 76.6 kPa where the wastewater is generated only from stormwater or drips, leaks or spills from non-process equipment, are not subject to the requirements of Conditions D.8.1(b)(1) and D.8.1(c).

(c) Waste storage tanks that are unsafe or difficult to monitor are not subject to the requirements of Condition D.8.1(c).

D.8.3 Leak Detection and Repair (LDAR) Standards [40 CFR Part 61, Subpart V and 326 IAC 2-2-3]

The LDAR standards that apply to components associated with the waste storage tanks are described in Section E.2 of this permit.

D.8.4 Startup, Shutdown and Malfunction Requirements [40 CFR 63.1259(a)(3), 40 CFR 63.697(b)(3), 326 IAC 2-2-3, 40 CFR 63.6(e) and 40 CFR 63.8(c)]

The NESHAP General Provisions for Startup, Shutdown and Malfunction (SSM) Plans [40 CFR 63.6(e) and 63.8(c)] shall be used to satisfy the Pharmaceutical MACT standards [40 CFR 63.1259(a)(3)], Offsite Waste MACT [40 CFR 63.697(b)(3)], and PSD BACT requirements [326 IAC 2-1.1-11].

(a) Pursuant to 40 CFR 63.6(e)(3), the Permittee shall develop an SSM Plan to ensure that processes are operated and maintained in a manner which satisfies the general duty to

minimize emissions established by 40 CFR 63.6(e)(1)(i), and that all malfunctions are corrected as soon as practicable after their occurrence in order to minimize excess emissions. The SSM Plan shall contain the following information:

(1) Detailed plans and/or procedures for operating and maintaining the process during periods of SSM; and

(2) Corrective action program for malfunctioning processes.

(b) The startup, shutdown and malfunction (SSM) requirements for the RTO control system, and associated closed-vent system, are described in Section D.11 of this permit.

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

D.8.5 Testing and Monitoring Requirements

The testing and monitoring requirements for the RTO control system, and associated closed-vent system, used to control emissions from the emission units listed in this section are described in Section D.11 of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3), 40 CFR 60.7, 40 CFR Part 60 Subpart Kb, and 40 CFR Part 63 Subpart GGG]

D.8.6 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

(1) RTO Control System Records - The record keeping requirements for the RTO control system, and associated closed-vent system, used to control emissions from these emission units are described in Section D.11 of this permit.

(2) Inspection and Maintenance Records - The Permittee shall maintain the following records of information and data related to Conditions D.8.1(c) and D.8.2:

(A) Identification and explanation of all waste storage tanks unsafe to inspect, including a plan for when these tanks will be inspected;

(B) Identification and explanation of all waste storage tanks difficult to inspect, including a plan for when these tanks will be inspected;

(C) Visual inspection log of waste storage tanks, including the date of inspection and a statement that no leaks were detected, if applicable;

(D) One-time Method 21 inspection log of each waste storage tank, including the date of inspection and a statement that no leaks were detected, if applicable;

(E) Information on each waste storage tank inspection during which a leak is detected, including:

(i) Instrument identification numbers, operator name or initials, and identification of the equipment;

(ii) Date the leak was detected and the date of the first attempt to repair the leak;

(iii) Maximum instrument reading measured after leak is successfully repaired or determined to be nonrepairable;

(iv) Reason for any delay of repair if leak not repaired within 15 calendar days after discovery of the leak;

(v) Name, initials, or other form of identification of person whose decision it was that repair could not be effected without a shutdown;

(vi) Expected date of successful repair of leak if leak not repaired within 15 calendar days after discovery of leak;

(vii) Dates of shutdowns that occur while the equipment is unrepaired; and

(viii) Date of successful repair of the leak.

(F) Periods of planned routine maintenance; and

(G) Records of waste storage tanks storing VOC/VOHAP with a vapor pressure less than 3.5 kPa.

(3) SSM Records - The Permittee shall maintain the following records:

(A) Records of the current and superseded versions of SSM Plan.

(B) Occurrence/duration records of each process malfunction.

(C) Information to demonstrate conformance with each SSM are consistent with the procedures in the SSM Plan.

(D) Records of actions taken during each SSM when different from SSM Plan.

(4) LDAR Records - The record keeping requirements for the LDAR standards are described in Section E.2 of this permit.

(5) Storage Tank Records - Pursuant to New Source Performance Standard for Volatile Organic Liquid Storage Vessels [40 CFR 60.116b(a) and (b)], the Permittee shall, for the life of the source, keep readily accessible records of the dimensions and capacity for all applicable waste storage tanks.

(6) Operating Plan – Pursuant to 40 CFR 60.115b, the Permittee shall, for the life of the source, maintain a copy of the operating plan required by 40 CFR 60.113b for all tanks with design capacity greater than or equal to 75 cubic meters.

(b) Quarterly Reporting Requirements

(1) The following streamlined quarterly reporting requirements shall satisfy the Pharmaceutical MACT standards [40 CFR 63.1260(g), (i), and (j)] and the PSD BACT requirements [326 IAC 2-1.1-11]:

(A) Inspections conducted during which a leak was detected;

(B) Periods of planned routine maintenance; and

(C) SSM summary reports for the processes.

(2) The reporting requirements for the RTO control system, and associated closed-vent system, used to control emissions from these emission units are described in Section D.11 of this permit.

(3) The reporting requirements for the LDAR standards are described in Section E.2 of this permit.

(4) Reports shall be submitted using the reporting forms located at the end of this permit, or their equivalent.

(c) Immediate Reporting Requirements

The reporting requirements in the NESHAP General Provisions for Startup, Shutdown and Malfunction (SSM) Plans [40 CFR 63.6(e)(3)] shall be used to satisfy the reporting requirements under the Pharmaceutical MACT standards [40 CFR 63.1259(a)(3)], Offsite Waste MACT standards [40 CFR 63.697(b)(3)], and PSD BACT requirements [326 IAC 2-1.1-11].

(1) Any time an action taken by the Permittee during an SSM event of a process is not consistent with the procedures specified in the SSM Plan and the SSM event results in an exceedance of a relevant emission standard, the Permittee shall report the actions taken for that event. The immediate report shall be submitted to the agency via a telephone call or facsimile within 2 working days after commencing actions inconsistent with the plan.

(2) Within 7 working days after the end of an SSM event of a process where an action taken by the Permittee is not consistent with the procedures specified in the SSM Plan, the Permittee shall submit a letter containing the following information in accordance with 40 CFR 63.10(d)(5):

(A) Name, title and signature of responsible official certifying accuracy;

(B) Explanation of the circumstances for the event;

(C) Reason for not following the SSM Plan; and

(D) Report any excess emissions and/or parameter monitoring exceedances that are believed to have occurred.

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

D.8.7 Modifications and Construction: Advance Approval of Permit Conditions

(a) The Permittee may modify any existing emission units 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.1 of this permit.

(b) The Permittee may construct and install new emission units of the types described in this D section 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 new 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.1 of this permit.

SECTION D.9 SUPPORT OPERATIONS – WASTE CONTAINER CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in the following facility description boxes is descriptive information and does not constitute enforceable conditions:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
SMALL WASTE CONTAINERS*:				
A small waste container, such as a drum, is defined as containing affected wastewater or offsite waste material containing VOC/VOHAP and having a capacity greater than 0.1 cubic meters (26.4 gallons) and equal to or less than 0.42 cubic meters (110.5 gallons). Identification of these types of containers have not been individually listed given they are portable and continually change. Each onsite wastewater container and offsite waste container with this description type will follow the requirements outlined in this section.				
LARGE WASTE CONTAINERS*:				
A large waste container, such as tanker or melon, is defined as containing affected wastewater or offsite waste material containing VOC/VOHAP and having a capacity greater than 0.42 cubic meters (110.5 gallons). Identification of these types of containers have not been individually listed given they are portable and continually change. Each container with this description type will follow the requirements outlined in this section.				

* Emission units marked with an asterisk are insignificant activities as defined by 326 IAC 2-7-1(21)(A) through (C).

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

D.9.1 Standards for Small Waste Containers [40 CFR 63.1256(d), 40 CFR 63.688, 326 IAC 2-2-3]

The following streamlined standards for small waste containers satisfy the requirements of the Pharmaceutical MACT Standards for wastewater containers [40 CFR 63.1256(d)], OSWRO MACT Standards for waste containers [40 CFR 63.688], and PSD BACT requirements [326 IAC 2-2-3]:

(a) Definition Standards:

(1) A small waste container is defined as any portable unit containing affected wastewater or offsite waste material containing VOC/VOHAP at concentrations greater than 500 ppmw with a storage capacity of greater than 0.1 cubic meters (26.4 gallons) and less than or equal to 0.42 cubic meters (110.5 gallons).

(b) Operational Standards:

(1) The cover and all openings on each waste container shall be maintained in the closed position, except when adding material, removing material, accessing material for non-transfer-related routine activities, openings caused from a pressure relief device, or opening of a safety device.

(2) Each waste container containing VOC/VOHAP shall meet existing Department of Transportation (DOT) specifications and testing requirements under 49 CFR Part 178.

(c) Inspection Standards:

(1) Initial and semiannual visual inspections shall be conducted for improper work practices and control equipment failures.

(2) Containers that are unsafe or difficult to monitor are not subject to the inspection requirements of Condition D.9.1(c)(1).

(3) The Permittee shall attempt to repair any defect within 24 hours after detection of the defective container and complete the repair within 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the waste shall be removed from the container and the container shall not be used to manage waste until the defect is repaired.

D.9.2 Standards for Large Waste Containers [40 CFR 63.1256(d), 40 CFR 63.688, 326 IAC 2-2-3]

The following streamlined standards for large waste containers satisfy the requirements of the Pharmaceutical MACT Standards for wastewater containers [40 CFR 63.1256(d)], OSWRO MACT Standards for waste containers [40 CFR 63.688], and PSD BACT requirements [326 IAC 2-2-3]:

(a) Definition Standards:

(1) A large waste container is defined as any portable unit containing affected wastewater or offsite waste material containing VOC/VOHAP at concentrations greater than 500 ppmw with a storage capacity of greater than 0.42 cubic meters (110.5 gallons).

(b) Operational Standards:

(1) The cover and all openings on each large waste container shall be maintained in the closed position, and without leaks, except when adding material, removing material, accessing material for non-transfer-related routine activities, opening from a pressure relief device, and opening of a safety device.

(2) A submerged fill pipe shall be used when pumping affected wastewater or offsite liquid waste into a large waste container. The submerged fill pipe outlet shall extend to no more than 6 inches or within two fill pipe diameters of the bottom of the container while the container is being filled.

(c) Inspection Standards:

(1) One-time Method 21 inspections shall be conducted on each new large waste container within 150 days upon first onsite usage.

(2) Initial and semiannual visual inspections shall be conducted for:

(A) Improper work practices;

(B) Control equipment failures; and

(C) Visible, audible, or olfactory indications of leaks.

(3) Containers that are unsafe or difficult to monitor are not subject to the inspection requirements of Conditions D.9.2(c)(1) and (2).

(4) The Permittee shall attempt to repair any defect within 24 hours after detection of the defective container and complete the repair within 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the waste shall be removed from the container and the container shall not be used to manage waste until the defect is repaired.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3), 40 CFR Part 63 Subpart GGG, 40 CFR Part 63 Subpart DD]

D.9.3 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

The Permittee shall maintain the following records for inspections required by Conditions D.9.1 and D.9.2:

(1) Identification and explanation of all containers unsafe to inspect, including a plan for when these containers will be inspected;

(2) Identification and explanation of all containers difficult to inspect, including a plan for when these containers will be inspected;

(3) Visual inspection log of waste containers, including the date of inspection and a statement that no leaks were detected, if applicable;

(4) One-time Method 21 inspection log of each large waste container, including the date of inspection and a statement that no leaks were detected, if applicable;

(5) Information on each waste container inspection during which a leak is detected, including:

(A) Instrument identification numbers, operator name or initials, and identification of the equipment;

(B) Date the leak was detected and the date of the first attempt to repair the leak; and

(C) Date of successful repair of the leak or date material removed from container.

(b) Quarterly Reporting Requirements

(1) The Permittee shall include the inspection records specified in Condition D.9.3(a)(5) for each inspection conducted during which a leak was detected in the next quarterly report.

(2) Reports shall be submitted using the reporting forms located at the end of this permit, or their equivalent.

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

D.9.4 Modifications and Construction: Advance Approval of Permit Conditions

(a) The Permittee may modify any existing emission units 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.1 of this permit.

(b) The Permittee may construct and install new emission units of the types described in this D section 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 new 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.1 of this permit.

SECTION D.10 SUPPORT OPERATIONS – INDIVIDUAL DRAIN SYSTEM CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The following information is descriptive information and does not constitute enforceable conditions:

Unit ID	Unit Description	Stack/Vent	Nominal Capacity	Control Device
Building 63:				
2nd floor drain system*	Drains	N/A	N/A	Water Seals

* Emission units marked with an asterisk are insignificant activities as defined by 326 IAC 2-7-1(21)(A) through (C).

The Permittee permanently shut down the emission unit that was listed in Section D.10.

Emission Limitations and Standards

D.10.1 through D.10.2 **Reserved**

Testing and Monitoring Requirements

D.10.3 **Reserved**

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3), 40 CFR Part 63 Subpart GGG]

D.10.4 Record Keeping Requirements

(a) Record Keeping Requirements

(1) **Reserved**

(2) **Reserved**

(3) SSM Records - The Permittee shall maintain the following records from October 1, 2004 to the date on which the Permittee decided to permanently shut-down the individual drain system operations:

(A) Records of the current and superseded versions of SSM Plan.

SECTION D.11 CONTROL SYSTEMS – RTO OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in the following facility description is descriptive information and does not constitute enforceable conditions:

The RTO control system consists of two Regenerative Thermal Oxidizers, identified as RTO1 and RTO2, each equipped with caustic scrubbing systems, and each exhausting to individual stacks.

The closed-vent system (CVS) associated with the RTO control system begins at the outlet side of the tank conservation vents of those tank modules exhausting to the RTO fume transport system and ends at the entrance of the RTO control system.

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

D.11.1 Control Device and Closed-Vent System Standards [40 CFR 63.1256(b) and (h), 63.1258(b), 40 CFR 63.685(c) and (d), 63.690(b), 63.693(f), 40 CFR 60.112b(a) and 60.113b(c), 326 IAC 2-2-3]

(a) RTO Control Device Standards – The RTO control device standards shall apply at all times the unit is burning waste fume streams, except as provided in Condition D.11.2(a)(2):

(1) Carbon Monoxide (CO) – In order to satisfy PSD BACT requirements [326 IAC 2-2-3], CO emissions at the outlet of the RTO system shall not exceed a 24-hour daily average of 73 parts per million by volume (ppmv).

(2) Oxides of Nitrogen (NO_X) – In order to satisfy PSD BACT requirements [326 IAC 2-2-3], NO_X emissions at the outlet of the RTO system shall not exceed a 24-hour daily average of 91 ppmv.

(3) Sulfur Dioxide (SO_2) – In order to satisfy PSD BACT requirements [326 IAC 2-2-3], SO_2 emissions, as measured at the outlet of the RTO system, shall meet one of the following emission standards:

(A) Control Efficiency Standard:

(i) The SO_2 emissions shall be reduced by a control efficiency of 97.5% or more at the outlet of the RTO system;

(ii) The 24-hour daily average scrubber liquid pH of the caustic scrubbing system shall not be less than the value established from a compliant stack test;

(iii) The 24-hour daily average scrubber liquid recirculation flow rate of the caustic scrubbing system shall not be less than the value established from a compliant stack test; and

(iv) The 24-hour daily average scrubber caustic flow rate of the caustic scrubbing system shall not exceed the value established from a compliant stack test.

(B) Concentration Emission Standard:

(i) The SO_2 emissions shall not exceed a 24-hour daily average of 100 ppmv at the outlet of the RTO system; and

(ii) The Permittee shall install and certify an SO_2 CEMS prior to using the concentration emission standard.

(4) Volatile Organic Compounds (VOC)/Volatile Organic Hazardous Air Pollutant (VOHAP) – In order to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1256(b) and (h), and 63.1258(b)], the Offsite Waste and Recovery Operations MACT requirements [40 CFR 63.685(c) and (d), 63.690(b), and 63.693(f)], the PSD BACT requirements [326 IAC 2-2-3], and the New Source Performance Standards for Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.112b(a) and 60.113b(c)], the Permittee shall meet one of the following streamlined VOC/VOHAP emission standards:

(A) Control Efficiency Standard:

(i) The VOC/VOHAP emissions shall be reduced by a control efficiency of 98% or more at the outlet of the RTO system;

(ii) The 24-hour daily average RTO combustion chamber temperature shall not be less than the value established from a compliant stack test; and

(iii) The solvent concentration going to the RTO, measured as a percent of the lower explosive limit (LEL), shall not exceed a 24-hour daily average established from a compliant stack test.

(B) Concentration Emission Standard:

(i) The VOC/VOHAP emissions shall not exceed 20 ppmv over a 24-hour daily average at the outlet of the RTO system, measured via a TOC CEMS;

(ii) The 24-hour daily average RTO combustion chamber temperature shall not be less than the value established from a compliant stack test;

(iii) The RTO combustion chamber residence time shall not be less than 0.75 seconds over a 24-hour daily average, which is equivalent to a maximum 24-hour daily average stack exhaust air flow rate of 3,340 standard cubic feet per second; and

(iv) The Permittee shall install and certify a TOC CEMS prior to using the concentration emission standard.

(5) Hydrogen Halide/Halogen and Fluorides – In order to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1256(b) and (h), and 63.1258(b)] and PSD BACT requirements for fluorides [326 IAC 2-2-3], the Permittee shall meet one of the following hydrogen halide and halogen emission standards:

(A) Concentration Emission Standard:

(i) The hydrogen halide and halogen emissions, which includes hydrogen fluoride emissions, shall not exceed 20 ppmv over a 24-hour daily average at the outlet of the RTO system, measured via a HCl CEMS; or

(B) Control Efficiency Standard:

(i) The hydrogen halide and halogen emissions, which includes hydrogen fluoride emissions, shall be reduced by a control efficiency of 98% or more at the outlet of the RTO system;

(ii) The 24-hour daily average scrubber liquid pH of the caustic scrubbing system shall not be less than the value established from a compliant stack test;

(iii) The 24-hour daily average scrubber liquid recirculation flow rate of the caustic scrubbing system shall not be less than the value established from a compliant stack test; and

(iv) The 24-hour daily average scrubber caustic flow rate of the caustic scrubbing system shall not exceed the value established from a compliant stack test.

(b) RTO Closed-Vent System Inspection Standards – The following inspection standards shall apply to the RTO closed-vent system (CVS), except as provided in Condition D.11.2(b):

(1) The Permittee shall comply with the following closed-vent system inspection requirements to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1256(b)(3) and 63.1258(h)], the Offsite Waste MACT requirements [40 CFR 63.685(g), 63.690(b), 63.693(b) and (c), and 63.695(c)], and the PSD BACT requirements [326 IAC 2-2-3]:

(A) Initial one-time Method 21 inspections shall be conducted on new portions of the RTO closed-vent system not operated under negative pressure within 150 days after startup.

(B) Portions of the CVS that are operated under negative pressure shall be equipped with a pressure gauge or other pressure measurement/ detection. The data output must be viewable from a readily accessible location to verify that negative pressure is being maintained when waste fume streams are going to the control system.

(C) Annual visual inspections of the RTO closed-vent system shall be performed for visible cracks, holes or gaps, loose connections, and broken or missing caps.

(D) Repair of any leak detected on the RTO closed-vent system shall be initiated no later than 5 calendar days after identification, and completed within 15 days after identification, unless:

(i) The repair is technically infeasible without a shutdown of an operation or process; or

(ii) It is determined that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.

Repairs delayed due to either of the causes described in (i) or (ii) shall be completed by the end of the next shutdown.

(2) The Permittee shall monitor each bypass line on the RTO closed-vent system to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1252(b) and 63.1258(b)], the Offsite Waste MACT requirements [40 CFR 63.685(g), 63.690(b), and 63.693(c)], and the PSD BACT requirements [326 IAC 2-2-3] using one of the following methods:

(A) Install and monitor the position of the closed-vent system bypass valve at least once every 15 minutes, where the closed position means there is no bypass flow; or

(B) Secure the bypass line valve in the closed position with a car seal or lock and key type configuration. Monthly visual inspections of seal or locking device shall be performed to ensure the seal is not broken or the valve is in the closed position and the vent stream is not diverted through the bypass line.

D.11.2 Exceptions to RTO Control System Standards [40 CFR 63.1260(g), 40 CFR 63.6(e)(3) and 63.8(c), 40 CFR 63.681, 63.685(g) and 63.693(b), and 326 IAC 2-2-3]

(a) Exceptions to RTO Control Device Operational Standards – The following streamlined standards satisfy the Pharmaceutical MACT standards [40 CFR 63.1260(g)], Offsite Waste MACT standards [40 CFR 63.681, 63.685(g) and 63.693(b)], and PSD BACT requirements [326 IAC 2-2-3]:

(1) The Permittee may open a safety device and vent directly to the atmosphere at any time conditions require it to do so to avoid unsafe conditions.

(2) The provisions of Conditions D.11.1(a) shall not apply during periods of startup, shutdown or malfunction that preclude the Permittee from complying with Condition D.11.1(a), provided the Permittee complies with the provisions of the startup, shutdown, and malfunction plan (SSM Plan) required by Condition D.11.3.

(b) Exceptions to RTO Closed-Vent System Inspection Standards – The following streamlined standards satisfy the Pharmaceutical MACT standards [40 CFR 63.1258(h)(6) and (7)], and PSD BACT requirements [326 IAC 2-2-3]:

(1) The Permittee is not required to inspect if unsafe or difficult to inspect.

D.11.3 Startup, Shutdown, and Malfunction Requirements for RTO Control System [40 CFR 63.1259(a)(3), 40 CFR 63.697(b)(3), 40 CFR 63.6(e)(3), 40 CFR 63.8(c) and 326 IAC 2-2-3]

(a) The NESHAP General Provisions for Startup, Shutdown and Malfunction (SSM) Plans [40 CFR 63.6(e)(3)] shall be used to satisfy the Pharmaceutical MACT standards [40 CFR 63.1259(a)(3)], Offsite Waste MACT standards [40 CFR 63.697(b)(3)] and PSD BACT requirements [326 IAC 2-1.1.11].

(b) Pursuant to 40 CFR 63.6(e)(3), the Permittee shall develop an SSM Plan to ensure that the RTO control system, including associated CEMS and CMS equipment, is operated and maintained in a manner which satisfies the general duty to minimize emissions established by 40 CFR 63.6(e)(1)(i), and that all malfunctions are corrected as soon as practicable after their occurrence in order to minimize excess emissions. The SSM Plan shall contain the following information:

(1) Detailed procedures for operating and maintaining the RTO system, including associated CEMS and CMS equipment, during periods of startup, shutdown, and malfunction; and

(2) Corrective action program for malfunctioning process and air pollution control equipment, including associated CEMS and CMS equipment.

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

D.11.4 Continuous Emissions Monitoring System (CEMS) Requirements [40 CFR Part 60, Appendix B and Appendix F, 40 CFR 60.113b(c), 40 CFR 63.1258(b), 40 CFR 63.693(f), 40 CFR 63.8, 326 IAC 2-1.1-11, 326 IAC 2-7-24, 326 IAC 3-5]

(a) CO and NO_X CEMS Operation Requirements – The following requirements shall apply when burning waste fume streams:

(1) The Permittee shall install and operate the CO and NO_X CEMS in accordance with the quality assurance/quality control (QA/QC) criteria set forth in 40 CFR Part 60, Appendix B and 40 CFR Part 60, Appendix F, Procedure 1.

(2) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period.

(3) The Startup, Shutdown, and Malfunction (SSM) Plan required by Condition D.11.3(b) shall include procedures for monitoring and recording the following information during times of CO or NO_X CEMS malfunction:

(A) When the CO CEMS malfunctions, the Permittee shall monitor and record the RTO combustion chamber temperature and exhaust air flow rate as required by Conditions D.11.6(a)(1) and (3), respectively.

(B) When the NO_X CEMS malfunctions, the Permittee shall monitor and record the combustion chamber temperature and exhaust air flow rate from the RTO as required by Conditions D.11.6(a)(1) and (3), and assess NO_X emissions using process knowledge to determine whether the quantity of nitrogen fed into the RTO during that time could have exceeded the worst case 24-hour daily average nitrogen feed rate of 1,085 pounds per hour that formed the basis of the NO_X BACT limit.

(b) SO_2 CEMS Operation Requirements – The following requirements shall apply when burning waste fume streams and applying the SO_2 concentration emission standard:

(1) The Permittee shall install and operate the SO_2 CEMS in accordance with the quality assurance/quality control (QA/QC) criteria set forth in 40 CFR Part 60, Appendix B and 40 CFR Part 60, Appendix F, Procedure 1.

(2) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period.

(3) The Startup, Shutdown, and Malfunction (SSM) Plan required by Condition D.11.3(b) shall include procedures for monitoring and recording the following information during times of SO_2 CEMS malfunction:

(A) When SO_2 CEMS malfunctions, the Permittee shall monitor and record the scrubber liquid recirculation flow rate and caustic flow rate as required by Conditions D.11.6(b)(1)(B) and (C) respectively and the scrubber liquid pH as required by Condition D.11.6(b)(1)(A).

(c) TOC CEMS Operation Requirements – When applying the TOC concentration emission standard, the following requirements shall apply when burning waste fume streams and represent the streamlined requirements of the Pharmaceutical MACT standards [40 CFR 63.1258(b)], Offsite Waste MACT standards [40 CFR 63.693(f)], NESHAP General Provisions monitoring requirements [40 CFR 63.8(c)], NSPS Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.113b(c)], PSD BACT requirements for VOCs [326 IAC 2-1.1-11], and emission monitoring requirements for MACT and PSD sources [326 IAC 3-5-1(b) and (d)]:

(1) The Permittee shall install and operate the TOC CEMS in accordance with the QA/QC criteria set forth in 40 CFR Part 60, Appendix B, 40 CFR 63.1258(b)(1)(x), and 40 CFR 63.8.

(2) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period.

(d) HCl CEMS Operation Requirements – When applying the hydrogen halides and halogens concentration emission standard, the following requirements shall apply when burning waste fume streams and represent the streamlined requirements of the Pharmaceutical MACT standards for hydrogen halides and halogens [40 CFR 63.1258(b)], NESHAP General Provisions monitoring requirements [40 CFR 63.8(c)], and PSD BACT requirements for fluorides [326 IAC 2-1.1-11]:

(1) The Permittee shall install and operate the HCl CEMS in accordance with the QA/QC criteria set forth in 40 CFR Part 60, Appendix B, 40 CFR 63.1258(b), and 40 CFR 63.8; or in accordance with an Alternative Monitoring Plan which must be submitted to U.S. EPA for approval.

(2) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period.

(e) Continuous Emissions Monitoring System (CEMS) Standard Operating Procedures (SOP) – The Permittee shall prepare and implement a SOP that provides step-by-step procedures and operations of the CEMS in accordance with 326 IAC 3-5-4(a), and that includes preventive maintenance procedures and corrective maintenance procedures that will be taken to ensure continuous operation and to minimize malfunctions.

D.11.5 Performance Testing Requirements [40 CFR 60.113b(c), 40 CFR 63.7, 40 CFR 63.1257(b) and (d) and 63.1258(b)(3), 40 CFR 63.693(f), 326 IAC 3-6-3(c), and 326 IAC 2-1.1-11]

(a) Initial Comprehensive Performance Test Requirements:

(1) VOC/VOHAP – Initial testing was performed on October 1 and 3, 2002 to satisfy requirements for the Pharmaceutical MACT standards [40 CFR 63.1257(b) and (d) and 63.1258(b)]. These tests shall also satisfy the Offsite Waste MACT standards [40 CFR 63.693(f)], Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.113b(c)], PSD BACT requirements [326 IAC 2-1.1-11], and emission testing requirements for MACT sources [326 IAC 3-6-3(c)].

(2) Hydrogen Halide/Halogen – Initial testing was performed on February 27 and 28, 2003 to satisfy requirements for the Pharmaceutical MACT standards [40 CFR 63.1258(b)]. These tests shall also satisfy the PSD BACT requirements for fluorides [326 IAC 2-1.1-11].

(3) Sulfur Dioxide (SO_2) – The following requirements satisfy the PSD BACT requirements for SO_2 [326 IAC 2-1.1-11]:

(A) If complying with the control efficiency standard, the Permittee shall conduct an initial performance test within 120 days of actual SO_2 emissions from the RTOs (before controls) exceeding 40 tons in the last 12-month period.

(B) The Permittee shall submit a notification of the performance test and a site-specific test plan at least 60 days in advance of the intended performance test date.

(C) The operating parameters defined in Condition D.11.1(a)(3)(A) shall be monitored during the performance test to establish the 24-hour daily average parametric limits, according to the requirements of 40 CFR 63.1258(b)(3)(ii).

(D) The Permittee shall submit the performance test reports, and upon request, the CMS performance evaluation, within 45 days following the test. The Permittee is allowed an extension if a reasonable explanation is provided within 40 days following the test.

(b) Subsequent Comprehensive Performance Test Requirements:

If the Permittee is complying with the control efficiency emission standards for VOC/VOHAP, SO_2 and Hydrogen Halide/Halogens, the performance tests shall be repeated at least once every fifth year from the date of the most recent valid compliance demonstration.

D.11.6 Parametric Continuous Monitoring System (CMS) Requirements [40 CFR 63.8(c), 40 CFR 60.113b(c), 40 CFR 63.1257(b), 63.1258(a) and (b), and 63.1260(e), 40 CFR 63.693(b), 326 IAC 2-1.1-11, 326 IAC 2-7-24, and 326 IAC 3-5-5(d)]

(a) VOC/VOHAP CMS Operation Requirements - The following requirements shall apply only when burning waste fume streams and represent the streamlined requirements of the Pharmaceutical MACT standards [40 CFR 63.1258(a) and (b)], Offsite Waste MACT standards [40 CFR 63.693(b)], Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.113b(c)], PSD BACT requirements [326 IAC 2-1.1-11], and continuous monitoring requirements for flow rate [326 IAC 3-5-5(d)]:

(1) RTO Combustion Chamber Temperature – The Permittee shall install and operate the RTO combustion chamber temperature CMS in accordance with 40 CFR 63.8(c), except where otherwise noted in Clinton Labs' Pharma MACT Pre-compliance Report, submitted on April 18, 2002, and subsequently revised on September 23 and November 15, 2002.

(2) FTS Solvent Concentration – When applying the VOC/VOHAP control efficiency standard, the Permittee shall install and operate a CMS to measure solvent concentration, as a percentage of the lower explosive limit (LEL), in accordance with 40 CFR 63.8(c), except where otherwise noted in Clinton Labs' Pharma MACT Pre-compliance Report, submitted on April 18, 2002, and subsequently revised on September 23 and November 15, 2002.

(3) Flow Rate Monitor – When applying the VOC/VOHAP concentration emission standard, the Permittee shall install and operate an air flow rate CMS at the stack exhaust in accordance with 326 IAC 3-5-5(d).

(4) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period.

(b) Hydrogen Halide/Halogen and Fluorides CMS Requirements -The following requirements shall apply only when burning waste fume streams and represent the streamlined requirements of the Pharmaceutical MACT standards for hydrogen halides and halogens [40 CFR 63.1257(b), 63.1258(b), and 63.1260(e)] and the PSD BACT requirements for fluorides [326 IAC 2-1.1-11]:

(1) When applying the control efficiency standard, the Permittee shall install and operate the following CMSs in accordance with 40 CFR 63.8(c):

(A) Scrubber liquid pH monitor;

(B) Scrubber liquid recirculation flow rate monitor; and

(C) Scrubber caustic flow rate monitor.

(2) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period.

(c) CMS Quality Control (QC) Program – The Permittee shall prepare and implement a Quality Control (QC) Program for the CMS units in accordance with 40 CFR 63.8(d).

D.11.7 Excursions [40 CFR 63.1258(b)(7), 40 CFR 63.695(e)(4), 326 IAC 2-1.1-11]

(a) Pursuant to the Pharmaceutical MACT standards [40 CFR 63.1258(b)(7)] and the Offsite Waste MACT [40 CFR 63.695(e)(4)], and to satisfy the monitoring for the BACT requirement [326 IAC 2-1.1-11], excursions are defined as follows and apply to the CEMS and CMS required by Conditions D.11.4(c) and (d), and D.11.6, respectively:

(1) When the period of control device operation (i.e., receiving waste fume streams) is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(2) When the period of control device operation (i.e., receiving waste fume streams) is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(b) A valid hour requires at least one data point for each 15-minute period in the operating hour.

D.11.8 Minimum Data Requirements – CO, NO_X and SO_2 CEMS [326 IAC 2-1.1-11]

The following defines when CEMS data must be supplemented with data required by Conditions D.11.4(a)(3), D.11.4(b)(3), D.11.9(a)(1)(L), and D.11.9(b)(2):

(a) When the period of control device operation (i.e., receiving waste fume streams) is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours, or

(b) When the period of control device operation (i.e., receiving waste fume streams) is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(c) Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the required 15-minute periods within the hour.

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

D.11.9 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

The Permittee shall maintain the following records:

(1) Control Device (RTO) Records – The following streamlined record keeping requirements satisfy the Pharmaceutical MACT requirements [40 CFR 63.1259], the Offsite Waste MACT standards [40 CFR 63.696], Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.115b], PSD BACT requirements [326 IAC 2-1.1-11 and 326 IAC 2-7-5(3)], and the continuous emission monitoring and performance testing requirements [326 IAC 3-5 and 3-6]:

(A) Log of the operating scenario (i.e., concentration standard or control efficiency standard) applied to satisfy the VOC/VOHAP and hydrogen halide and halogen emission standards required by Conditions D.11.1(a)(4) and D.11.1(a)(5) in an On-Site Implementation Log (OSIL);

(B) Records of the current and superseded versions (during previous 5-year period) of SSM Plan;

(C) Description of worst-case operating conditions, if complying with control efficiency standard;

(D) Results of control device performance tests and CMS performance evaluations, if complying with control efficiency standard;

(E) Records of all required CMS and CEMS data;

(F) Records of each CMS and CEMS calibration check;

(G) Maintenance records for each control device, CMS, and CEMS;

(H) Occurrence/duration records of each control device malfunction, CMS malfunction, and CEMS malfunction;

(I) Information to demonstrate conformance with each SSM are consistent with procedures in the SSM Plan;

(J) Records of actions taken during each SSM when different from SSM Plan;

(K) Record of the current standard operating procedure (SOP) for the RTO CEMS units and quality control (QC) program for CMS units; and

(L) For days when Condition D.11.8 requires that CEMS data must be supplemented, documentation of the information required by Conditions D.11.4(a)(3) and D.11.4(b)(3).

(2) Closed-Vent System (RTO CVS) Records – The following streamlined record keeping requirements satisfy the Pharmaceutical MACT requirements [40 CFR 63.1259], the Offsite Waste MACT standards [40 CFR 63.696], Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.115b], PSD BACT requirements [326 IAC 2-1.1-11 and 326 IAC 2-7-5(3)], and the continuous emission monitoring and performance testing requirements [326 IAC 3-5 and 3-6]:

(A) Hourly records of bypass flow indicator operating status and the time and duration of all diversions detected by the bypass flow indicator, if complying via this method;

(B) Monthly visual inspection records of bypass line valves and the occurrence of all periods the valve position has changed, if complying via this method;

(C) Record of each CVS component that is unsafe to inspect, and a plan for inspecting the component as frequently as practicable during safe-to-inspect times;

(D) Record of each CVS component that is difficult to inspect and a written plan for inspecting the component at least once every five years;

(E) Record of the following information if no leaks are detected during the applicable Method 21 inspection and CVS annual visual inspections:

(i) Date each inspection was performed; and

(ii) Statement for each inspection that no leaks were detected.

(F) For each part of the CVS not operated under negative pressure, record of the following information for all leaks detected during the initial Method 21 inspection:

(i) Identification of leaking equipment;

(ii) Instrument ID and operator name or initials;

(iii) Date the leak was detected and date of first attempt to repair leak;

(iv) Maximum instrument reading after leak from initial Method 21 is successfully repaired or declared non-repairable; and

(v) Record of reason for any delay of repair, name of person responsible for decision, expected date of repair, dates of shutdowns when repair is made and date of successful repair of leak.

(G) Record of the following information for all leaks detected from the CVS annual visual inspection:

(i) Identification of leaking equipment;

(ii) Date leak was detected and first attempt to repair leak; and

(iii) Record of reason for any delay of repair, name of person responsible for decision, expected date of repair, dates of shutdowns when repair is made and date of successful repair of leak.

(b) Quarterly Periodic Reports

(1) The following streamlined reporting requirements satisfy the Pharmaceutical MACT requirements [40 CFR 63.1260(g)] and the Offsite Waste MACT standards [40 CFR 63.697], which reference the MACT General Provisions [40 CFR 63.7 through 63.10], Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.115b], PSD BACT requirements [326 IAC 2-1.1-11], and the continuous emission monitoring requirements [326 IAC 3-5]:

(A) Reports shall be submitted using the reporting forms located at the end of this permit, or their equivalent;

(B) If total duration of excess emissions, parameter exceedances, or excursions is 1% or greater of total operating time OR total CMS downtime is greater than 5% for reporting period, include:

(i) 15-minute data and daily averages for all operating days out of the range;

(ii) duration of excursions; and

(iii) operating logs and scenarios for all operating days out of range;

(C) Summary reports of excess emissions, parameter exceedances, and monitor downtime including information specified in 40 CFR 63.10(c)(5) through (c)(13);

(D) Report, when applicable, no excess emissions, no exceedances, no excursions, and no CMS has been inoperative, out of control, repaired or adjusted;

(E) For CVS bypass lines with flow indicator: report all periods when vent stream is diverted from control device through bypass line;

(F) For CVS bypass lines without flow indicator: report periods in which seal mechanism is broken, position has changed or key to unlock bypass line valve was checked out;

(G) Report each new operating scenario that has been operated since last report; and

(H) SSM summary reports for the RTO control system, including associated CEMS and CMS equipment.

(2) In addition to the requirements described in (b)(1) of this condition, the Permittee shall report the following information for the CO, NO_X and SO_2 CEMS to satisfy the PSD BACT requirements [326 IAC 2-1.1-11]:

(A) A list of days when Condition D.11.8 requires that CEMS data must be supplemented.

(B) A detailed report for each day when Condition D.11.8 requires that CEMS data must be supplemented that provides:

(i) the information required by Condition D.11.4(a)(3) and D.11.4(b)(3), and

(ii) an analysis of whether that information indicates continuous compliance with the limits established in Condition D.11.1, and if the NO_X CEMS malfunctions for greater than six continuous hours, an assessment of NO_X emissions, using process knowledge to determine whether the quantity of nitrogen fed into the RTO during that time could have exceeded the worst case 24-hour daily average nitrogen feed rate of 1,085 pounds per hour that formed the basis of the NO_X BACT limit.

(c) Immediate Reporting Requirements

The reporting requirements in the NESHAP General Provisions for Startup, Shutdown and Malfunction (SSM) Plans [40 CFR 63.6(e)(3)] shall be used to satisfy the reporting requirements under the Pharmaceutical MACT standards [40 CFR 63.1259(a)(3)], Offsite Waste MACT standards [40 CFR 63.697(b)(3)], and PSD BACT requirements [326 IAC 2-1.1-11].

(1) The Permittee shall report all actions taken during an RTO system SSM event that results in an exceedance of a relevant emission standard when those actions are inconsistent with the procedures specified in the SSM Plan. The immediate report shall be submitted to the agency via a telephone call or facsimile within 2 working days after commencing actions inconsistent with the plan.

(2) Within 7 working days after the end of an SSM event of the RTO control system and associated CEMS and CMS equipment where an action taken by the Permittee is not consistent with the procedures specified in the SSM Plan, the Permittee shall submit a letter containing the following information in accordance with 40 CFR 63.10(d)(5):

(A) Name, title and signature of responsible official certifying accuracy;

(B) Explanation of the circumstances of the event;

(C) Reason for not following the SSM Plan; and

(D) Report any excess emissions and/or parameter monitoring exceedances that are believed to have occurred.

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

D.11.10 Modifications and Construction: Advance Approval of Permit Conditions

(a) The Permittee may modify any existing emission units 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.1 of this permit.

(b) The Permittee may construct and install new emission units comparable in function to the emission units listed in this D section 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 new 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.1 of this permit.

SECTION D.12 TO3/TO4 LIQUID WASTE INCINERATORS, INCLUDING ASSOCIATED AIR POLLUTION CONTROL EQUIPMENT AND CONTINUOUS MONITORING SYSTEMS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in the following facility description box is descriptive information and does not constitute enforceable conditions:

Emission Unit Description	Building	Stack/Vent*	Nominal Capacity	Control Device*
TO3 Liquid Waste Incinerator	C9	PVC9TO3/4	85 MMBtu/hr	Condenser/Absorber; Hydro-Sonic™ Scrubber; Polishing Scrubber
TO4 Liquid Waste Incinerator	C9	PVC9TO3/4	85 MMBtu/hr	Condenser/Absorber; Hydro-Sonic™ Scrubber; Polishing Scrubber

*The TO3 and TO4 incinerators utilize a common air pollution control (APC) system and exhaust through the same stack.

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

D.12.1 General Applicability Requirements with Emission Standards [326 IAC 2-2-3 and 40 CFR Part 63, Subparts DD and EEE]

(a) Pursuant to the Hazardous Waste Combustor (HWC) MACT Standards [40 CFR 63.1206(b)(1)(i)] and the PSD BACT requirements [326 IAC 2-2-3], the emission standards and operating requirements shall apply as specified in Conditions D.12.2, D.12.3, D.12.4, D.12.5, D.12.6, D.12.7, and D.12.16 except during periods of startup, shutdown, and malfunction.

(b) Pursuant to the Off-Site Waste and Recovery Operations MACT Standards [40 CFR 63.684(b)(5)(i)], the TO3/TO4 incinerators shall have a permit issued under 40 CFR Part 270 whenever off-site waste material is treated and destroyed in the incinerators.

(c) Pursuant to the HWC MACT standards [40 CFR 63.1206(b)(5)(i), (ii) and (iii)] and the PSD requirements [326 IAC 2-2-3], the Permittee may make a change in the design, operation, or maintenance practices documented in the comprehensive performance test plan (CPT plan), Documentation of Compliance (DOC), Notification of Compliance (NOC), or startup, shutdown, and malfunction plan (SSM plan). The requirements for changes affected by HWC MACT are described in Condition F.1.13.

D.12.2 Particulate Matter Emission Standards [40 CFR 63.1203]

In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(7)], the particulate matter (PM) emissions from the TO3/TO4 liquid waste incinerators stack exhaust shall not exceed 34 milligrams per dry standard cubic meter (mg/dscm) [0.015 grains per dry standard cubic foot (gr/dscf)], corrected to 7 percent oxygen.

D.12.3 Sulfur Dioxide (SO_2) Emission Standards [326 IAC 2-2-3]

In order to satisfy the PSD BACT requirements [326 IAC 2-2-3], the TO3/TO4 liquid waste incinerators shall be equipped with a caustic scrubber system to control SO_2 emissions. The SO_2 emissions from the incinerators stack exhaust, as monitored by a CEMS, shall not exceed 500 ppmv, dry corrected to 7% oxygen, averaged over a 24-hour daily period when burning waste streams. The incinerators are not subject to emission limitations and standards in 326 IAC 7 because they do not have the capability to burn fuel oil.

D.12.4 Oxides of Nitrogen (NO_X) Emission Standards [326 IAC 2-2-3]

In order to satisfy the PSD BACT requirements [326 IAC 2-2-3], the TO3/TO4 liquid waste incinerators shall implement good combustion practices to control NO_X emissions. The NO_X emissions from the incinerators stack exhaust, as monitored by a continuous emissions monitor, shall not exceed 975 ppmv (expressed as NO_2), dry basis, corrected to 7% oxygen, averaged over a 24-hour daily period when burning waste streams.

D.12.5 Hazardous Air Pollutant (HAP) and Fluoride Emission Standards [40 CFR 63.1203 and 326 IAC 2-2-3]

Except for periods of startup, shutdown and malfunction, the following emission standards shall apply at all times the TO3/TO4 liquid waste incinerators are operating:

(a) Mercury – In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(2)], the mercury emissions from the TO3/TO4 liquid waste incinerators stack exhaust shall not exceed 130 micrograms per dry standard cubic meter (μg/dscm), corrected to 7% oxygen.

(b) Lead and Cadmium – In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(3)], the total semi-volatile metals (lead and cadmium) emissions from the TO3/TO4 liquid waste incinerators stack exhaust shall not exceed 240 μg/dscm, corrected to 7% oxygen.

(c) Arsenic, Beryllium, and Chromium – In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(4)], the total low volatile metals (arsenic, beryllium, and chromium) emissions from the TO3/TO4 liquid waste incinerators stack exhaust shall not exceed 97 μg/dscm, corrected to 7% oxygen.

(d) Hydrochloric Acid/Chlorine Gas (HCl/Cl_2) and Fluorides – In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(6)], the HCl/Cl_2 emissions from the TO3/TO4 liquid waste incinerators stack exhaust shall not exceed 77 ppmv, dry corrected to 7% oxygen, expressed as hydrochloric acid equivalent. In order to satisfy the PSD BACT requirements for fluorides [326 IAC 2-2-3], the TO3/TO4 liquid waste incinerators control system shall achieve a HCl control efficiency of 98% or greater, when they are operating in waste mode.

(e) Dioxin/Furans – In order to satisfy HWC MACT standards [40 CFR 63.1203(a)(1)], the dioxin/furan emissions from the TO3/TO4 liquid waste incinerators stack exhaust shall not exceed 0.40 ng TEQ/dscm, corrected to 7% oxygen.

(f) Principal Organic Hazardous Constituents (POHCs) – In order to satisfy the HWC MACT standards [40 CFR 63.1203(c)(1) and (2)], the Permittee shall comply with the following requirements:

(1) The destruction and removal efficiency (DRE) for each principal organic hazardous constituent (POHC), excluding dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027, shall be at least 99.99 percent.

(2) Dioxin-listed hazardous wastes F020, F021, F022, F023, F026, or F027 shall not be burned in the TO3/TO4 liquid waste incinerators.

D.12.6 Carbon Monoxide (CO) Emission Standards [326 IAC 2-2-3 and 40 CFR 63.1203]

In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(5)(i)] and the PSD BACT requirements [326 IAC 2-2-3], the CO emissions from the TO3/TO4 liquid waste incinerators stack exhaust shall not exceed an hourly rolling average (rolled on a one-minute basis) of 100 parts per million by volume, dry basis, corrected to 7 percent oxygen (ppmvdc) at all times the incinerators are operating except during periods of startup, shutdown, and malfunction.

D.12.7 Hydrocarbon (HC) and Volatile Organic Compound (VOC) Emission Standards [326 IAC 2-2-3 and 40 CFR 63.1203]

(a) In order to satisfy the HWC MACT standards for HC [40 CFR 63.1203(a)(5)(i)] and the PSD BACT requirements for VOC [326 IAC 2-2-3], the hourly rolling average hydrocarbon emissions, as monitored with a CEMS during the POHC DRE test, shall not exceed 10 ppmv, dry basis, corrected to 7% oxygen, and reported as propane.

(b) During the POHC DRE test, the CO emissions shall not exceed an hourly rolling average of 100 ppmv, dry basis, corrected to 7% oxygen (monitored with a continuous emissions monitoring system).

D.12.8 Automatic Waste Feed Cutoff System Requirements [40 CFR 63.1206]

In order to satisfy the HWC MACT standards [40 CFR 63.1206], the Permittee shall operate the TO3/TO4 liquid waste incinerators with a functioning Automatic Waste Feed Cutoff (AWFCO) system that meets the requirements of 40 CFR 63.1206(c)(3).

(a) Except as allowed under (c) and (f) of this condition, the AWFCO system shall be operated such that it immediately and automatically cuts off the hazardous waste feed when any of the following occur at any time:

(1) An operating parameter is exceeded;

(2) The CO emission standard is exceeded;

(3) A span value of any CMS, except a CEMS, is met or exceeded;

(4) Upon malfunction of a CMS (excluding the NO_X and SO_2 CEMS) monitoring an operating parameter limit or emission level; or

(5) When any component of the automatic waste feed cutoff system fails.

(b) During all AWFCO events, the Permittee shall continue to:

(1) Duct combustion gases to the air pollution control system while hazardous waste remains in the combustion chamber; and

(2) Monitor the applicable combustor operating parameters and emission levels.

(c) The Permittee may ramp down the hazardous waste feed rate of pumpable hazardous waste over a period not to exceed one (1) minute during an AWFCO event in accordance with the procedures in the O&M plan, providing the automatic waste feed cutoff is not triggered by an exceedance of any of the following operating limits:

(1) Minimum combustion chamber temperature,

(2) Maximum hazardous waste feed rate, or

(3) Any hazardous waste combustor firing system operating limits.

The procedures for AWFCO events specified in the O&M plan must include a statement that the ramp down must begin immediately upon initiation of automatic waste feed cutoff and must prescribe a bona fide ramping down.

(d) Except as allowed under (f) of this condition, after an AWFCO event, the Permittee shall not restart the hazardous waste feed until the operating parameters and emission levels are within their respective limits.

(e) If after any AWFCO event, there is an exceedance of an emission standard or operating requirement, irrespective of whether the exceedance occurred while hazardous waste remained in the combustion chamber, the Permittee shall:

(1) Investigate the cause of the AWFCO, and

(2) Take appropriate corrective measures to minimize future AWFCOs.

(f) The following exceptions are allowed for the operation of the AWFCO system as specified in Condition D.12.8(a):

(1) If primary waste is not being burned as indicated by the position of the primary waste feed block valve(s), the Permittee may exceed the operating parameter limit for primary waste atomizing media pressure specified in Condition D.12.16(a)(2)(B), without triggering an AWFCO of the secondary waste feed.

(2) If secondary waste is not being burned as indicated by the position of the secondary waste feed block valve(s), the Permittee may exceed the operating parameter limit for secondary waste atomizing media pressure specified in Condition D.12.16(a)(2)(B), without triggering an AWFCO of the primary waste feed.

D.12.9 Leak Detection and Repair (LDAR) Program [326 IAC 2-2-3, 40 CFR Part 63, Subpart DD, 40 CFR Part 61, Subpart V]

The LDAR standards that apply to components associated with the waste transfer/feed systems connected to the TO3/TO4 liquid waste incinerators are described in Section E.2 of this permit.

D.12.10 Inspection Requirements [40 CFR 63.1206(c)]

(a) In order to satisfy the HWC MACT standards [40 CFR 63.1206(c)(5)], the Permittee shall conduct daily visual inspections of the TO3/TO4 liquid waste incinerators to ensure the combustion zone is sealed.

(b) In order to satisfy the HWC MACT standards [40 CFR 63.1206(c)(3)(vii)], the Permittee shall test the AWFCO system and associated alarms at least once per week to verify operability, unless the operating record documents that the weekly inspections unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, the Permittee shall conduct operability testing monthly.

D.12.11 Training and Certification Requirements [40 CFR 63.1206(c)(6)]

(a) In order to satisfy the HWC MACT standards [40 CFR 63.1206(c)(6)], the Permittee shall establish a Training and Certification Program for all categories of personnel whose activities may reasonably be expected to directly affect emissions of HAPs from all operations associated with the TO3/TO4 liquid waste incinerators.

Said programs shall be of a technical level commensurate with the person's duties as specified in the training manual.

(b) A certified control room operator shall be on duty at the site at all times the TO3/TO4 liquid waste incinerators are in operation and the TO3/TO4 liquid waste incinerators, including associated air pollution control equipment and continuous monitoring systems, shall be operated and maintained at all times by persons who are trained and certified according to the Training and Certification Program.

D.12.12 Plans and Procedures [326 IAC 2-2-3, 40 CFR 63.1206, 40 CFR 63.1211, 326 IAC 2-7-5(13)]

In order to satisfy the HWC MACT Standards [40 CFR 63.1206] and the PSD BACT requirements [326 IAC 2-2-3], the Permittee shall develop and implement the following written plans:

(a) Operations and Maintenance (O&M) Plan – The O&M Plan shall define operations during periods of normal operation pursuant to 40 CFR 63.1206(c)(1) and (7).

(b) Startup, Shutdown, and Malfunction (SSM) Plan – The SSM Plan shall be developed and implemented in accordance with 40 CFR 63.1206(c)(2), 40 CFR 63.6(e)(3), and 40 CFR 63.8(c), to ensure that the TO3/TO4 liquid waste incinerators, including associated air emission control equipment and CEMS and CMS, are operated and maintained in a manner which satisfies the general duty to minimize emissions established by 40 CFR 63.6(e)(1)(i), and that all malfunctions are corrected as soon as practicable after their occurrence in order to minimize excess emissions. The SSM Plan shall contain the following information:

(1) Detailed procedures for operating and maintaining the TO3/TO4 incinerators, including associated CEMS and CMS equipment, during periods of startup, shutdown, and malfunction; and

(2) Corrective action program for malfunctioning process, air pollution control, CEMS, and CMS equipment.

(c) Feedstream Analysis Plan -The Feedstream Analysis Plan shall be developed and implemented in accordance with 40 CFR 63.1209(c)(2) for those parameters with feed rate limits defined in Condition D.12.16.

(d) Continuous Emissions Monitoring System (CEMS) Standard Operating Procedures (SOP) – The Permittee shall prepare and implement a SOP that provides step-by-step procedures and operations of the CEMS in accordance with 326 IAC 3-5-4(a), and that includes preventive maintenance procedures and corrective maintenance procedures that will be taken to ensure continuous operation and to minimize malfunctions.

Simultaneous Operation of TO3/TO4 Liquid Waste Incinerators

D.12.13 Restriction on Simultaneous Operation of TO3/TO4 Liquid Waste Incinerators

The Permittee shall not operate both the TO3 and TO4 liquid waste incinerators at the same time, in either waste or idle mode.

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

D.12.14 Performance Test Requirements [40 CFR 63.1207, 326 IAC 2-1.1-11, 326 IAC 3-6]

The following streamlined performance test requirements shall satisfy the NESHAP General Provisions [40 CFR 63.7], the HWC MACT requirements [40 CFR 63.1207 and 63.1209], the PSD BACT requirements for VOC and fluorides [326 IAC 2-1.1-11], and the State emission testing requirements [326 IAC 3-6]:

(a) Initial Comprehensive Performance Test Requirements:

(1) Unless the Permittee requests U.S. EPA Region 5 to waive the initial comprehensive performance test and its request is granted, comprehensive performance tests will be performed on both TO3 and TO4 liquid waste incinerators.

(2) The Permittee shall commence initial comprehensive performance tests within 6 months of the compliance date for the TO3 and TO4 liquid waste incinerators,

unless an extension is granted pursuant to 40 CFR 63.1207(e)(3) or if U.S. EPA Region 5 grants Permittee's request to waive the initial comprehensive performance test.

(3) If the U.S. EPA Region 5 does not approve the Permittee's request to waive the initial comprehensive performance test, and instead requires the Permittee to perform additional performance testing, the Permittee shall submit the required notification(s) within an acceptable schedule, upon final determination of Permittee's request by U.S. EPA Region 5.

(4) The Permittee shall submit a notification of the performance test and CMS performance evaluation and submit a comprehensive performance test plan at least one (1) year in advance of the intended performance test date(s) for the TO3 and TO4 liquid waste incinerators.

(5) The initial comprehensive performance test(s) shall be conducted under operating conditions representative of the extreme range of normal conditions as specified in 40 CFR 63.6(f)(2)(iii)(B) and 63.7(e)(1) for the worst case mode associated with each applicable pollutant limit or emission standard.

(6) The operating parameters defined in Condition D.12.16 shall be monitored during the performance test(s) to establish the parametric limits.

(7) All required comprehensive performance testing shall be completed within 60 days after the date of commencement of the test(s) pursuant to 40 CFR 63.1207(d)(3).

(8) The Permittee may use previous emissions test data in lieu of the initial comprehensive performance test as allowed under 40 CFR 63.1207(c)(2).

(9) Pursuant to 40 CFR 63.7(h)(2), individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering the request.

(10) Pursuant to 40 CFR 63.1207(j), the Permittee shall:

(A) Postmark a Notification of Compliance (NOC) documenting compliance or noncompliance with the emission standards and continuous monitoring system requirements and identify operating parameter limits under 40 CFR 63.1209 within 90 days of completion of the comprehensive performance test(s); and

(B) Comply with all operating requirements specified in the NOC in lieu of the limits specified in the Documentation of Compliance required under 40 CFR 63.1211(c) upon postmark of the NOC.

The Permittee may choose to comply with the operating requirements for the TO3 and TO4 liquid waste incinerator based on the results of the unit-specific initial comprehensive performance tests. Alternatively, the Permittee may choose to comply with the more stringent of the operating requirements for both incinerators based on the results of the initial comprehensive performance test for TO3 and TO4 liquid waste incinerators.

These submittal requirements satisfy the reporting requirements of 326 IAC 3-6 as allowed under extension provisions of 326 IAC 3-6-4(b).

(11) Pursuant to 40 CFR 63.1207(l), if the Permittee determines that it has exceeded an emission standard during the initial comprehensive performance test for a particular mode of operation:

(A) It must immediately cease burning hazardous waste under that mode of operation.

(B) Hazardous waste may only be burned for the purpose of pre-testing or comprehensive performance testing under revised operating conditions, and only for a maximum of 720 hours, unless the Permittee obtains written approval for a petition submitted in accordance with 40 CFR 63.1207(l)(3).

(C) It must conduct a comprehensive performance test under revised operating conditions and submit a Notification of Compliance within 90 days of completion of comprehensive performance test.

These submittal requirements satisfy the reporting requirements of 326 IAC 3-6 as allowed under extension provisions of 326 IAC 3-6-4(b).

(D) Comply with all operating requirements specified in the NOC in lieu of the limits specified in the revised operating conditions that were established for pre-testing or comprehensive performance testing, upon postmark of the NOC.

(b) Subsequent Comprehensive Performance Tests

(1) Pursuant to 40 CFR 63.1207(d)(4)(i), no subsequent comprehensive performance tests (including DRE tests) shall be required until the U.S. EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001, unless the Permittee modifies or otherwise alters operations such that compliance with the emission standards of Conditions D.12.2, D.12.5, and D.12.7 cannot be achieved.

(2) Upon promulgation of the permanent replacement standards, the Permittee shall comply with the subsequent comprehensive testing requirements established.

(c) Confirmatory Performance Tests

(1) Pursuant to 40 CFR 63.1207(d)(4)(ii), no confirmatory performance tests shall be required until the U.S. EPA promulgates permanent replacement standards pursuant to the Settlement Agreement noticed in the Federal Register on November 16, 2001.

(2) Upon promulgation of the permanent replacement standards, the Permittee shall comply with the subsequent confirmatory testing requirements established.

D.12.15 Continuous Emissions Monitoring Systems (CEMS) Operating Requirements [40 CFR 63.1209, 40 CFR 63.8, 326 IAC 3-5, 326 IAC 2-1.1-11, 40 CFR Part 60, Appendix B, and 40 CFR Part 60, Appendix F]

(a) CO and O_2 CEMS Operation Requirements – The following requirements shall be applied at all times the TO3/TO4 incinerators are in operation and represent the streamlined requirements of the HWC MACT standards for CO and HC [40 CFR 63.1209(a), (d), (e), (f), and (h)], PSD BACT requirements for CO and VOCs [326 IAC 2-1.1-11], and the emission monitoring requirements for MACT and PSD sources [326 IAC 3-5-1(b) and (d)]:

(1) The Permittee shall install and operate the CO and O_2 CEMS in accordance with the QA requirements of the HWC MACT standards [40 CFR Part 63, Appendix to Subpart EEE], the applicable QC and performance evaluation requirements of 40 CFR 63.1209(d), and the applicable performance specification requirements of 40 CFR Part 60, Appendix B.

(2) The CEMS shall be installed and operational upon certification of the DOC for the HWC MACT.

(3) Continuous operation of a CEMS is defined as sampling the regulated parameter without interruption, evaluating the detector response at least once every 15 seconds, and computing and recording the average value at least every 60 seconds.

(b) SO_2 and NO_X CEMS Operation Requirements – The following requirements shall apply when the TO3/TO4 incinerators are burning waste and represent the PSD BACT requirements for SO_2 and NO_X [326 IAC 2-1.1-11] and the emission monitoring requirements for PSD sources [326 IAC 3-5-1(d)]:

(1) The Permittee shall install and operate the SO_2 and NO_X CEMS in accordance with the QA/QC criteria set forth in 40 CFR Part 60, Appendix B and 40 CFR Part 60, Appendix F, Procedure 1.

(2) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period.

(3) The Startup, Shutdown, and Malfunction (SSM) Plan required by Condition D.12.12(b) shall include procedures for monitoring and recording the following information during times of SO_2 or NO_X CEMS malfunction:

(A) When the SO_2 CEMS malfunctions, the Permittee shall monitor and record the equivalent differential pressure across the Hydro-Sonic™ scrubber, polishing scrubber pressure drop, scrubber liquid to gas ratios, polishing scrubber liquid pH, and the condenser/absorber liquid pH as required by Condition D.12.16(a)(3)(C), Condition D.12.16(a)(5)(E), Condition D.12.16(a)(3)(D), Condition D.12.16(a)(5)(C), and Condition D.12.16(a)(5)(F), respectively.

(B) When the NO_X CEMS malfunctions, the Permittee shall monitor and record the combustion chamber temperature, flue gas flow rate, and primary and secondary waste feed rates as required by Condition D.12.16(a)(1), and if the NO_X CEMS malfunctions for greater than six continuous hours, assess the NO_X emissions, using waste testing, waste shipment, and/or process knowledge to determine whether the quantity of nitrogen fed into the incinerator during that time could have exceeded the worst case 24-hour daily average nitrogen feed rate of 1,650 pounds per hour that formed the basis of the NO_X BACT limit.

D.12.16 Parametric Continuous Monitoring Systems (CMS) Requirements [40 CFR 63.8(c), 40 CFR 63.1209, and 326 IAC 2-1.1-11]

(a) Except as stated in Conditions D.12.16(a)(1)(C), D.12.16(a)(1)(D) and D.12.16(a)(2)(B), the Permittee shall operate the following CMSs in accordance with the quality assurance requirements specified in 40 CFR 63.1209(d) at all times the TO3/TO4 incinerators are in operation. To satisfy the HWC MACT standards [40 CFR 63.1209(b), (d), (e), (f), and (h)] and the requirements for PSD sources [326 IAC 2-1.1-11] the following parameters, except as stated in Conditions D.12.16(a)(1)(C), D.12.16(a)(1)(D) and D.12.16(a)(2)(B), shall be monitored at all times the TO3/TO4 incinerators are in operation. In addition, except as stated in Conditions D.12.16(e), (f), and (g), the operating parameters monitored by the following CMSs shall not exceed the established operating parameter limits at all times incinerators are burning waste.

(1) Dioxin/Furan CMS Requirements – Pursuant to the HWC MACT standards [40 CFR 63.1209(k)], the Permittee shall install and operate CMS monitors for the following parameters:

(A) Combustion Chamber Temperature - Minimum hourly rolling average combustion chamber temperature established from the average temperature measured during the three DRE test runs.

(i) For TO3 liquid waste incinerator, the hourly rolling average combustion chamber temperature shall not be lower than 1,906 ºF.

(ii) For TO4 liquid waste incinerator, the hourly rolling average combustion chamber temperature shall not be lower than 1,957 ºF.

(B) Flue Gas Flow Rate - Maximum hourly rolling average flue gas flow rate established from the average of the maximum hourly rolling average for each performance test run.

(i) For TO3 liquid waste incinerator, the hourly rolling average flue gas flow rate shall not exceed 16,046 standard cubic feet per minute, on a wet basis.

(ii) For TO4 liquid waste incinerator, the hourly rolling average flue gas flow rate shall not exceed 15,996 standard cubic feet per minute, on a wet basis.

(C) Primary Waste Feed Rate - Maximum hourly rolling average primary waste feed rate as established from the average of the maximum hourly rolling average for each performance test run.

If primary waste is not being burned as indicated by the position of the primary waste feed block valve(s), operation of the primary waste feed rate CMS is not required and the Permittee may use a value of 0 lb/hr for primary waste feed rate, or the Permittee may continue to use the valid primary waste feed rate values being monitored and recorded by the primary waste feed rate CMS, for calculating the hourly and 12-hour rolling average values for relevant operating parameters.

(i) For TO3 liquid waste incinerator, the hourly rolling average primary waste feed rate shall not exceed 6,030 pounds per hour.

(ii) For TO4 liquid waste incinerator, the hourly rolling average primary waste feed rate shall not exceed 5,975 pounds per hour.

(D) Secondary Waste Feed Rate - Maximum hourly rolling average secondary waste feed rate as established from the average of the maximum hourly rolling average for each performance test run.

If secondary waste is not being burned as indicated by the position of the secondary waste feed block valve(s), operation of the secondary waste feed rate CMS is not required and the Permittee may use a value of 0 lb/hr for secondary waste feed rate, or the Permittee may continue to use the valid secondary waste feed rate values being monitored and recorded by the secondary waste feed rate CMS, for calculating the hourly and 12-hour rolling average values for relevant operating parameters.

(i) For TO3 liquid waste incinerator, the hourly rolling average secondary waste feed rate shall not exceed 17,001 pounds per hour.

(ii) For TO4 liquid waste incinerator, the hourly rolling average secondary waste feed rate shall not exceed 16,597 pounds per hour.

(2) DRE Standard CMS Requirements – Pursuant to the HWC MACT standards [40 CFR 63.1209(j)], the Permittee shall install and operate CMS monitors for the following parameters:

(A) Those parameters identified in Condition D.12.16(a)(1).

(B) Minimum hourly rolling average primary and secondary atomizing media pressure, established based on manufacturer's recommendations.

If primary waste is not being burned as indicated by the position of the primary waste feed block valve(s), operation of the primary waste atomizing media pressure CMS is not required and the Permittee may freeze the hourly rolling average calculation when primary waste is not being burned, or the Permittee may continue to use the valid primary waste atomizing media pressure values being monitored and recorded by the primary waste atomizing media pressure CMS, for calculating the hourly rolling average values.

If secondary waste is not being burned as indicated by the position of the secondary waste feed block valve(s), operation of the secondary waste atomizing media pressure CMS is not required and the Permittee may freeze the hourly rolling average calculation when secondary waste is not being burned, or the Permittee may continue to use the valid secondary waste atomizing media pressure values being monitored and recorded by the secondary waste atomizing media pressure CMS, for calculating the hourly rolling average values.

(i) For TO3 liquid waste incinerator, the hourly rolling average primary waste atomizing media pressure shall not be lower than 60 pounds per square inch, gauge.

(ii) For TO3 liquid waste incinerator, the hourly rolling average secondary waste atomizing media pressure shall not be lower than 60 pounds per square inch, gauge.

(iii) For TO4 liquid waste incinerator, the hourly rolling average primary waste atomizing media pressure shall not be lower than 60 pounds per square inch, gauge.

(iv) For TO4 liquid waste incinerator, the hourly rolling average secondary waste atomizing media pressure shall not be lower than 60 pounds per square inch, gauge.

In addition, the Permittee shall establish limits on the following parameters. These data collection activities do not require continuous monitoring systems.

(C) Maximum primary waste feed viscosity, established based on manufacturer's recommendations. The primary waste feed viscosity shall be monitored through periodic analysis of the primary waste feed, as specified in the Permittee's Feedstream Analysis Plan.

(i) For TO3 liquid waste incinerator, the primary waste feed viscosity shall not exceed 460 centipoise.

(ii) For TO4 liquid waste incinerator, the primary waste feed viscosity shall not exceed 460 centipoise.

(D) Maximum secondary waste feed viscosity, established based on manufacturer's recommendations. The secondary waste feed viscosity shall be monitored through periodic analysis of the secondary waste feed, as specified in the Permittee's Feedstream Analysis Plan.

(i) For TO3 liquid waste incinerator, the secondary waste feed viscosity shall not exceed 460 centipoise.

(ii) For TO4 liquid waste incinerator, the secondary waste feed viscosity shall not exceed 460 centipoise.

(3) Metals CMS Requirements – Pursuant to the HWC MACT standards [40 CFR 63.1209(l) and (n)], the Permittee shall install and operate CMS monitors for the following parameters:

(A) Waste Feed Rate - Maximum 12-hour rolling average feed rates for total Hg, semi-volatile metals (cadmium and lead) and low volatile metals (arsenic, beryllium, and chromium) in all waste feedstreams established from the average of the hourly rolling averages for each performance test run and approved extrapolation techniques~~;~~.

(i) For TO3 liquid waste incinerator, the 12-hour rolling average feed rate for total Hg shall not exceed 0.0040 pounds per hour.

(ii) For TO3 liquid waste incinerator, the 12-hour rolling average feed rate for semi-volatile metals (cadmium and lead) shall not exceed 0.10 pounds per hour.

(iii) For TO3 liquid waste incinerator, the 12-hour rolling average feed rate for low volatile metals (arsenic, beryllium, and chromium) shall not exceed 0.30 pounds per hour.

(iv) For TO4 liquid waste incinerator, the 12-hour rolling average feed rate for total Hg shall not exceed 0.0040 pounds per hour.

(v) For TO4 liquid waste incinerator, the 12-hour rolling average feed rate for semi-volatile metals (cadmium and lead) shall not exceed 0.22 pounds per hour.

(vi) For TO4 liquid waste incinerator, the 12-hour rolling average feed rate for low volatile metals (arsenic, beryllium, and chromium) shall not exceed 0.30 pounds per hour.

(B) Scrubber Liquids Solid Content -

(i) Condenser/Absorber - Maximum 12-hour rolling average density of the condenser/absorber sump liquid using a continuous monitoring system established from the average of the performance test run averages. This parameter does not apply to mercury.

(a) For TO3 liquid waste incinerator, the 12-hour rolling average density of the condenser/absorber sump liquid shall not exceed 8.367 pounds per gallon.

(b) For TO4 liquid waste incinerator, the 12-hour rolling average density of the condenser/absorber sump liquid shall not exceed 8.401 pounds per gallon.

(ii) Hydro-Sonic™ Scrubber 1st Stage - Maximum 12-hour rolling average density of the demister sump liquid using a continuous monitoring system established from the average of the performance test run averages. This parameter does not apply to mercury.

(a) For TO3 liquid waste incinerator, the 12-hour rolling average density of the demister sump liquid shall not exceed 8.361 pounds per gallon.

(b) For TO4 liquid waste incinerator, the 12-hour rolling average density of the demister sump liquid shall not exceed 8.363 pounds per gallon.

(iii) Polishing Scrubber - Maximum 12-hour rolling average density of the polishing scrubber liquid using a continuous monitoring system established from the average of the performance test run averages. This parameter does not apply to mercury.

(a) For TO3 liquid waste incinerator, the 12-hour rolling average density of the polishing scrubber liquid shall not exceed 8.494 pounds per gallon.

(b) For TO4 liquid waste incinerator, the 12-hour rolling average density of the polishing scrubber liquid shall not exceed 8.511 pounds per gallon.

(C) Hydro-Sonic™ Scrubber Pressure Drop - Minimum hourly rolling average equivalent differential pressure across the Hydro-Sonic™ scrubber established from the average of the performance test run averages and based on the following equation:

Equivalent dP = (Measured dP) + $[(3*10^{-11})*(\text{Steam Rate})^3]$ – $[(4*10^{-7})*(\text{Steam Rate})^2]$ + 0.0026*(Steam Rate)

The Permittee may develop a site-specific model to calculate the equivalent differential pressure. The site-specific model should be submitted to the U.S. EPA Region 5 for approval. The site-specific model can be used for demonstrating compliance with the operating parameter limit on equivalent differential pressure only after approval by U.S. EPA Region 5.

(i) For TO3 liquid waste incinerator, the hourly rolling average equivalent differential pressure across the Hydro-Sonic™ scrubber shall not be lower than 68 inches of water column.

(ii) For TO4 liquid waste incinerator, the hourly rolling average equivalent differential pressure across the Hydro-Sonic™ scrubber shall not be lower than 68 inches of water column.

(D) Scrubber Liquid to Gas Ratio -

(i) Hydro-Sonic™ Scrubber 1st Stage – Minimum hourly rolling average Hydro-Sonic™ scrubber liquid to gas ratio at the 1st stage free jet nozzle established from the average of the performance test run averages.

(a) For TO3 liquid waste incinerator, the hourly rolling average Hydro-Sonic™ scrubber liquid to gas ratio at the 1st stage free jet nozzle shall not be lower than 0.00999 (gallons per minute) per (standard cubic feet per minute), wet basis.

(b) For TO4 liquid waste incinerator, the hourly rolling average Hydro-Sonic™ scrubber liquid to gas ratio at the 1st stage free jet nozzle shall not be lower than 0.01038 (gallons per minute) per (standard cubic feet per minute), wet basis.

(ii) Hydro-Sonic™ Scrubber 2nd Stage – Minimum hourly rolling average Hydro-Sonic™ scrubber liquid to gas ratio at the 2nd stage free jet nozzle established from the average of the performance test run averages.

(a) For TO3 liquid waste incinerator, the hourly rolling average Hydro-Sonic™ scrubber liquid to gas ratio at the 2nd stage free jet nozzle shall not be lower than 0.00593 (gallons per minute) per (standard cubic feet per minute), wet basis.

(b) For TO4 liquid waste incinerator, the hourly rolling average Hydro-Sonic™ scrubber liquid to gas ratio at the 2nd stage free jet nozzle shall not be lower than 0.00614 (gallons per minute) per (standard cubic feet per minute), wet basis.

(E) Those parameters identified in Condition D.12.16(a)(1)(B).

(4) PM CMS Requirements – Pursuant to the HWC MACT standards [40 CFR 63.1209(m)], the Permittee shall install and operate CMS monitors for the following parameters:

(A) Those parameters identified in Condition D.12.16(a)(3)(B), (C), (D), and (E); and

(B) Ash Feed Rate - Maximum 12-hour rolling average ash feed rate established from the average of the test run averages.

(i) For TO3 liquid waste incinerator, the 12-hour rolling average ash feed rate shall not exceed 1,861 pounds per hour.

(ii) For TO4 liquid waste incinerator, the 12-hour rolling average ash feed rate shall not exceed 1,628 pounds per hour.

(5) HCl/Cl_2 and Fluorides CMS Requirements – Pursuant to the HWC MACT standards [40 CFR 63.1209(o)] and monitoring requirements for PSD sources [326 IAC 2-1.1-11], the Permittee shall install and operate CMS monitors for the following parameters:

(A) Those parameters identified in Condition D.12.16(a)(3)(C) and (D);

(B) Waste Feed Rate - Maximum 12-hour rolling average feed rate for chlorine (organic and inorganic) in all waste feedstreams established from the average of the performance test run averages. [40 CFR 63.1209(o)(1)]

(i) For TO3 liquid waste incinerator, the 12-hour rolling average feed rate for chlorine shall not exceed 2,632 pounds per hour.

(ii) For TO4 liquid waste incinerator, the 12-hour rolling average feed rate for chlorine shall not exceed 2,771 pounds per hour.

(C) Polishing Scrubber Liquid pH - Minimum hourly rolling average polishing scrubber liquid pH established from the average of the performance test run averages. [40 CFR 63.1209(o)(3)(iv)]

(i) For TO3 liquid waste incinerator, the hourly rolling average polishing scrubber liquid pH shall not be lower than 4.6.

(ii) For TO4 liquid waste incinerator, the hourly rolling average polishing scrubber liquid pH shall not be lower than 4.4.

(D) Polishing Scrubber Liquid Feed Pressure – Minimum hourly rolling average polishing scrubber liquid feed pressure established from manufacturer's specifications.

(i) For TO3 liquid waste incinerator, the hourly rolling average polishing scrubber liquid feed pressure shall not be lower than 6.8 pounds per square inch, gauge.

(ii) For TO4 liquid waste incinerator, the hourly rolling average polishing scrubber liquid feed pressure shall not be lower than 6.8 pounds per square inch, gauge.

(E) Polishing Scrubber Pressure Drop – Minimum hourly rolling average pressure drop across the polishing scrubber established from manufacturer's specifications. [40 CFR 63.1209(o)(3)(ii)]

(i) For TO3 liquid waste incinerator, the hourly rolling average pressure drop across the polishing scrubber shall not be lower than 2.3 inches of water column.

(ii) For TO4 liquid waste incinerator, the hourly rolling average pressure drop across the polishing scrubber shall not be lower than 2.3 inches of water column.

(F) Condenser/Absorber Liquid pH – Minimum hourly rolling average condenser/absorber liquid pH established from the average of the performance test run averages. [40 CFR 63.1209(o)(3)(iv)]

(i) For TO3 liquid waste incinerator, the hourly rolling average condenser/absorber liquid pH shall not be lower than 4.1.

(ii) For TO4 liquid waste incinerator, the hourly rolling average condenser/absorber liquid pH shall not be lower than 4.6.

(G) Condenser/Absorber Liquid Feed Pressure – Minimum hourly rolling average condenser/absorber liquid feed pressure established from manufacturer's specifications. [40 CFR 63.1209(o)(3)(iii)]

(i) For TO3 liquid waste incinerator, the hourly rolling average condenser/absorber liquid feed pressure shall not be lower than 8 pounds per square inch, gauge.

(ii) For TO4 liquid waste incinerator, the hourly rolling average condenser/absorber liquid feed pressure shall not be lower than 8 pounds per square inch, gauge.

(H) Condenser/Absorber Pressure Drop – Minimum hourly rolling average pressure drop across the condenser/absorber established from manufacturer's specifications. [40 CFR 63.1209(o)(3)(ii)]

(i) For TO3 liquid waste incinerator, the hourly rolling average pressure drop across the condenser/absorber shall not be lower than 2.3 inches of water column.

(ii) For TO4 liquid waste incinerator, the hourly rolling average pressure drop across the condenser/absorber shall not be lower than 2.3 inches of water column.

(I) Pursuant to 40 CFR 63.1209(o)(3)(v) and a letter from U.S. EPA on September 13, 2004, Condenser/Absorber Liquid to Gas Ratio – Minimum

hourly rolling average condenser/absorber liquid to gas ratio established from manufacturer's specifications for liquid flow rate and the average of the performance test run averages for flue gas flow rate. [40 CFR 63.1209(o)(3)(v)]

(i) For TO3 liquid waste incinerator, the hourly rolling average condenser/absorber liquid to gas ratio shall not be lower than 0.0561 (gallons per minute) per (standard cubic feet per minute), wet basis.

(ii) For TO4 liquid waste incinerator, the hourly rolling average condenser/absorber liquid to gas ratio shall not be lower than 0.0566 (gallons per minute) per (standard cubic feet per minute), wet basis.

(J) Polishing Scrubber Liquid to Gas Ratio – Minimum hourly rolling average polishing scrubber liquid to gas ratio established from the average of the performance test run averages. [40 CFR 63.1209(o)(3)(v)]

(i) For TO3 liquid waste incinerator, the hourly rolling average polishing scrubber liquid to gas ratio shall not be lower than 0.0124 (gallons per minute) per (standard cubic feet per minute), wet basis.

(ii) For TO4 liquid waste incinerator, the hourly rolling average polishing scrubber liquid to gas ratio shall not be lower than 0.0136 (gallons per minute) per (standard cubic feet per minute), wet basis.

(K) Hydro-Sonic™ Scrubber Liquid pH - Minimum hourly rolling average Hydro-Sonic™ scrubber liquid pH at 1st stage free jet nozzle established from the average of the performance test run averages. [40 CFR 63.1209(o)(3)(iv)]

(i) For TO3 liquid waste incinerator, the hourly rolling average Hydro-Sonic™ scrubber liquid pH at 1st stage free jet nozzle shall not be lower than 5.8.

(ii) For TO4 liquid waste incinerator, the hourly rolling average Hydro-Sonic™ scrubber liquid pH at 1st stage free jet nozzle shall not be lower than 5.8.

(b) Continuous operation of a CMS is defined as sampling the regulated parameter without interruption, evaluating the detector response at least once every 15 seconds, and computing and recording the average value at least every 60 seconds.

(c) Pursuant to the HWC MACT standards [40 CFR 63.1209(a)(5)] and the monitoring methods for PSD sources [326 IAC 2-1.1-11], the Permittee may petition the Administrator to use CEMS for monitoring in lieu of compliance with the operating parameter limits established in (a) of this condition.

(d) If applicable, the Permittee may document compliance using the waiver provisions of 40 CFR 63.1207(m) in lieu of complying with the requirements of (a) and (c) of this condition.

(e) Pursuant to 40 CFR 63.1207(h), the operating parameter limits specified in Condition D.12.16(a) are waived during subsequent comprehensive performance tests.

(f) Pursuant to 40 CFR 63.1207(h), the operating parameter limits specified in Condition D.12.16(a) are waived during pre-testing prior to comprehensive performance testing for an aggregate time not to exceed 720 hours (unless an extension is approved by IDEM) under an approved test plan or if the source records the results of the pre-testing.

(g) If the Permittee submits a new Notification of Compliance based on the results of a subsequent comprehensive performance test, pursuant to 40 CFR 63.1210(b), the operating parameter limits specified in the new Notification of Compliance supersede the operating parameter limits in Condition D.12.16(a) until the operating permit is revised to incorporate the new operating parameter limits.

D.12.17 Minimum Data Requirements – SO_2 and NO_X CEMS [326 IAC 2-1.1-11]

The following defines when CEMS data must be supplemented with data required by Conditions D.12.15(b)(3), D.12.18(a)(12), and D.12.19(a)(2):

(a) When the period of incinerator operation (i.e., receiving waste streams) is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 % of the operating hours, or

(b) When the period of incinerator operation (i.e., receiving waste streams) is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(c) Monitoring data are insufficient to constitute a valid hour of data if measured values are unavailable for any of the required 15-minute periods within the hour.

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

D.12.18 Record Keeping Requirements

(a) The Permittee shall maintain the following records:

(1) Notifications, reports, and other documents, such as the Documentation of Compliance, as required by 40 CFR 63.1200, 63.1211(c), and 63.10(b) and (c);

(2) All data recorded by continuous monitoring systems (CMS), including continuous emission monitoring systems (CEMS), required by Conditions D.12.15 and D.12.16;

(3) Documentation that a change will not adversely affect compliance with the emission standards or operating requirements as required by 40 CFR 63.1206(b)(5)(ii);

(4) Records of the estimated hazardous waste residence time as required by 40 CFR 63.1206(b)(11);

(5) Plans and procedures as required by Condition D.12.12;

(6) Documentation of the results of the investigation, corrective measures taken, and evaluation of excessive exceedances during malfunctions as required by 40 CFR 63.1206(c)(2)(v)(A);

(7) Findings and corrective measures for any AWFCO that results in an exceedance of an applicable emission standard or operating parameter limit as required by 40 CFR 63.1206(c)(3)(v);

(8) Documentation and results of the AWFCO operability testing as required by Condition D.12.10(b) and 40 CFR 63.1206(c)(3)(vii);

(9) Daily visual inspection records of the TO3/TO4 liquid waste incinerators to ensure the combustion zone is sealed as required by Condition D.12.10(a) and 40 CFR 63.1206(c)(5);

(10) A copy of the Operator Certification and Training Program required in Condition D.12.11 and 40 CFR 63.1206(c)(6);

(11) Documentation of the changes in modes of operation as required by 40 CFR 63.1209(q); and

(12) For days when Condition D.12.17 requires that CEMS data must be supplemented, documentation of the information required by Condition D.12.15(b)(3).

(b) The record keeping and reporting requirements for the LDAR standards are described in Section E.2 of this permit.

D.12.19 Reporting Requirements

(a) Quarterly Reporting Requirements

(1) The following streamlined quarterly reporting requirements shall satisfy the HWC MACT standards [40 CFR 63.1211], which references the MACT General Provisions [40 CFR 63.7 through 63.10], PSD BACT requirements [326 IAC 2-1.1-11], and the continuous emissions monitoring requirements [326 IAC 3-5]:

(A) Reports shall be submitted using the reporting forms located at the end of this permit, or their equivalent;

(B) Summary reports of excess emissions, parameter exceedances, and monitor downtime including information specified in 40 CFR 63.10(c)(5) through (c)(13);

(C) SSM summary reports for the TO3/TO4 waste incinerators control system, including associated CEMS and CMS equipment; and

(D) Excessive exceedances report, if applicable, as required by 40 CFR 63.1206(c)(3)(vi).

(2) In addition to the requirements described in (a)(1) of this condition, the Permittee shall report the following information for the SO_2 and NO_X CEMS to satisfy the PSD BACT requirements [326 IAC 2-1.1-11]:

(A) For days when Condition D.12.17 requires that CEMS data must be supplemented, a detailed report that provides:

(i) the information required by Condition D.12.15(b)(3), and

(ii) an analysis of whether that information indicates continuous compliance with the limits established in Condition D.12.3 and

D.12.4, and if the NO_X CEMS malfunctions for greater than six continuous hours, an assessment of NO_X emissions, using waste testing, waste shipment, and/or process knowledge to determine whether the quantity of nitrogen fed into the incinerator during that time could have exceeded the worst case 24-hour daily average nitrogen feed rate of 1,650 pounds per hour that formed the basis of the NO_X BACT limit.

(b) Immediate Reporting Requirements

(1) The Permittee shall submit any revision to the SSM Plan that may significantly increase emissions of hazardous air pollutants to the Administrator for approval within 5 days after making a change to the plan to satisfy the reporting requirements under the HWC MACT standards [40 CFR 63.1206(c)(2)(ii)(C)].

(2) The reporting requirements in the NESHAP General Provisions for Startup, Shutdown and Malfunction (SSM) Plans [40 CFR 63.6(e)(3)] shall be used to satisfy the reporting requirements under the HWC MACT standards [40 CFR 63.1206(c)(2)] and PSD BACT requirements [326 IAC 2-1.1-11].

(A) The Permittee shall report all actions taken during a TO3/TO4 incinerator system SSM event that results in an exceedance of a relevant emission standard when those actions are inconsistent with the procedures specified in the SSM Plan. The immediate report shall be submitted to the agency via a telephone call or facsimile within 2 working days after commencing actions inconsistent with the plan.

(B) Within 7 working days after the end of an SSM event where an action taken by the Permittee is not consistent with the procedures specified in the SSM Plan, the Permittee shall submit a letter containing the following information in accordance with 40 CFR 63.10(d)(5):

(i) Name, title and signature of responsible official certifying accuracy;

(ii) Explanation of the circumstances of the event;

(iii) Reason for not following the SSM Plan; and

(iv) Report any excess emissions and/or parameter monitoring exceedances that are believed to have occurred.

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

D.12.20 Modifications and Construction: Advance Approval of Permit Conditions

(a) The Permittee may modify any existing emission units 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.1 of this permit.

(b) The Permittee may construct and install new emission units of the types described in this D section 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 new 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.1 of this permit.

SECTION D.13 SOLID WASTE INCINERATOR OPERATING CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Facility Description [326 IAC 2-7-5(15)]

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

(a) The following emissions units are subject to applicable requirements described in this D section. The Bartlett-Snow solid waste incinerator was permanently shut down on August 30, 2005, and is designated for demolition.

Bldg.	Unit ID	Unit Description	Stack/Vent ID	Control Device	Capacity	Units
C10	RK01	Bartlett-Snow Solid Waste Incinerator	PVC10BS	Packed-Bed Scrubber; Hydro-Sonic™ Scrubber	3,000	lb/hr

Emission Limitations and Standards

D.13.1 through D.13.7 **Reserved**

Testing and Monitoring Requirements

D.13.8 through D.13.12 **Reserved**

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

D.13.13 Record Keeping Requirements

(a) For the operation of the Bartlett-Snow incinerator from October 1, 2004 to August 30, 2005, the Permittee shall maintain records of the scrubber monitoring as required by Condition D.13.9 of T165-6462-00009, issued October 1, 2004, as follows:

(1) The scrubber water feed rate for Stage 1 and Stage 2 and pressure drop across the hydro-sonic scrubber recorded at least once per day.

(2) The pH of the hydro-sonic scrubber water recorded at least once per hour.

(b) For the operation of Bartlett-Snow incinerator from October 1, 2004 to August 30, 2005, as required by Condition D.13.10 of T165-6462-00009, issued October 1, 2004, the Permittee shall maintain records of the continuous monitoring of combustion chamber temperature (primary burner and afterburner), and 60-minute rolling average stack gas flow rate at least once per hour. The Permittee must also keep records of number of drums fed to the incinerator per hour, the weight of each drum, and the waste classification (hazardous or non-hazardous) for each drum.

(c) For the operation of Bartlett-Snow incinerator from October 1, 2004 to August 30, 2005, the Permittee shall maintain records of the visible emissions monitoring, as required by Condition D.13.11 of T165-6462-00009, issued October 1, 2004.

(d) Beginning September 30, 2004 and until September 30, 2005, the Permittee shall maintain records of the weight of hospital, medical and infectious waste; and the total weight of wastes incinerated each calendar quarter.

(e) For the operation of Bartlett-Snow incinerator from October 1, 2004 to August 30, 2005, the Permittee shall maintain records of the Operation and Maintenance Plan,

as required by Condition D.13.1(c)(4); and Preventive Maintenance Plan, as required by Condition D.13.7 of T165-6462-00009, issued October 1, 2004.

(f) For the operation of Bartlett-Snow incinerator from October 1, 2004 to August 30, 2005, the Permittee shall maintain records of the Compliance Response Plan, as required by Condition D.13.11(e) of T165-6462-00009, issued October 1, 2004.

SECTION D.14 SUPPORT OPERATIONS – GENERAL WASTEWATER CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in the following facility description is descriptive information and does not constitute enforceable conditions.

(a) Wastewater Operations – The emission units associated with the wastewater operations can generally be described as storage and transfer facilities (wastewater tanks and containers) and treatment facilities (incineration or off-site treatment). The specific emission units are described in Sections D.8, D.9, D.12 and D.15 of this permit.

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

D.14.1 Definition of Wastewater [40 CFR 63.1251 and 40 CFR 63.1256(a)(1)(i)]

(a) Wastewater in this section of the permit is defined as any water that is discarded from a pharmaceutical manufacturing process unit through a single point of determination (POD) that contains an annual average concentration of partially soluble and/or soluble HAP compounds of at least 5 parts per million by weight and a load of at least 0.05 kg/yr. Wastewater does not include the following:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems, including testing of such systems;

(3) Spills;

(4) Water from safety showers;

(5) Samples of a size not greater than reasonably necessary for the method of analysis that is used;

(6) Equipment leaks;

(7) Wastewater drips from procedures such as disconnecting hoses after clearing lines;

(8) Noncontact cooling water; and

(9) Primary waste (waste with a net positive heating value).

The primary waste is not considered wastewater because it has not passed through a POD, as it has not exited its last recovery device, the hazardous waste combustor.

(b) Point of determination (POD) is defined as the point where a wastewater stream exits the process, storage tank, or last recovery device. If soluble and/or partially soluble HAP compounds are not recovered from water before discharge, the discharge point from the process equipment or storage tank is a POD. If water streams are routed to a recovery device, the discharge from the recovery device is a POD. There can be more than one POD per process or pharmaceutical manufacturing process unit. [40 CFR 63.1251]

(c) Affected wastewater is defined as follows:

(1) Any wastewater stream containing partially soluble HAP compounds at an annual average concentration greater than 1,300 ppmw, and the total soluble and

partially soluble HAP load in all wastewater from the PMPU exceeds 0.25 Mg/yr; or [40 CFR 63.1256(a)(1)(i)(A)]

(2) Any wastewater stream containing partially soluble and/or soluble HAP compounds at an annual average concentration greater than 5,200 ppmw, and the total soluble and partially soluble HAP load in all wastewater from the PMPU exceeds 0.25 Mg/yr. [40 CFR 63.1256(a)(1)(i)(B)]

D.14.2 Maintenance Wastewater [40 CFR 63.1256(a)(4)(iii)]

The Permittee shall prepare a maintenance wastewater plan and implement this plan as part of the Startup, Shutdown, and Malfunction (SSM) Plan as required under 40 CFR 63.6(e)(3). [40 CFR 63.1256(a)(4)(iii)]

Maintenance wastewater is exempt from all other provisions of 40 CFR 63.1256 except 40 CFR 63.1256(a)(4)(ii).

D.14.3 Storage and Transfer of Affected Wastewater [40 CFR 63.1256(b), (d), and (e)] [326 IAC 2-2-3]

(a) The following emission units are used to store or transfer affected wastewater:

(1) Waste Containers – The emission units and performance standards are described in Section D.9 of this permit.

(2) **Reserved**

(3) Affected Wastewater Tanks – These emission units and performance standards are streamlined with the requirements for waste tanks described in Section D.8 of this permit.

(b) The emission units in the Animal Health Manufacturing operations do not store or transfer affected wastewater.

D.14.4 Treatment of Affected Wastewater [40 CFR 63.1256] [326 IAC 2-2-3]

Pursuant to the Pharmaceutical MACT requirements under 40 CFR 63.1256 and 326 IAC 2-2-3, the affected wastewater shall be treated using the following methods as applicable:

(a) Waste incineration – The equipment and performance standards for the thermal destruction of the affected wastewater by incineration are described in Section D.12 of this permit.

(b) Transfer of affected wastewater streams for offsite treatment – The performance standards for offsite disposal of affected wastewater are described in Section D.15 of this permit.

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

D.14.5 Testing and Monitoring Requirements

The testing and monitoring requirements for the storage, transfer and treatment of the affected wastewater are described in Sections D.8, D.9, D.12, and D.15 of this permit.

Record Keeping and Reporting Requirements

D.14.6 Record Keeping and Reporting Requirements

(a) The following record keeping and reporting requirements apply to the maintenance wastewater plan required under 40 CFR 63.1256(a)(4)(iv) and 63.6(e)(3):

(1) Maintain record of original maintenance wastewater plan for the life of the affected source or until the affected source is no longer subject to the provisions of this rule;

(2) Maintain updated versions of the maintenance wastewater plan, as necessary;

(3) Maintain records for each instance the plan was implemented and whether the plan was followed; and

(4) Record and report all instances within 2 working days after commencing actions inconsistent with the maintenance wastewater plan, followed by a written letter within 7 working days after the end of the event.

(b) Each POD as defined in Condition D.14.1(b) shall be identified and its wastewater HAP concentration documented in the On-Site Implementation Log (OSIL) as required by 40 CFR 63.1259(b)(6) and 40 CFR 63.1251 – Operating scenario. The operating scenario requirements are described in Condition F.1.10 in Section F.1 of this permit.

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

D.14.7 Modifications and Construction: Advance Approval of Permit Conditions

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

SECTION D.15 SUPPORT OPERATIONS – TRANSFER OF AFFECTED WASTEWATER FOR OFFSITE TREATMENT CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The information in this facility description section does not constitute enforceable conditions. The transfer of affected wastewater for offsite treatment relates to either of the following situations:

(a) Shipment of affected wastewater stored onsite to an offsite treatment facility; or

(b) Receipt of an offsite affected wastewater to be treated onsite.

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

D.15.1 Shipment of Affected Wastewater to an Offsite Treatment Facility [40 CFR 63.1256(a)(5)]

(a) Pursuant to the Pharmaceutical MACT standards for wastewater [40 CFR 63.1256(a)(5)(i)(B)], the Permittee shall include a notice with each shipment of affected wastewater or residual removed from affected wastewater to an offsite treatment facility. The notice shall state that the affected wastewater or residual contains organic HAP that must be treated in accordance with the treatment requirements of the Pharmaceutical MACT standards. When the transport is continuous or ongoing, the notice shall be submitted to the treatment operator initially and whenever there is a change in the required treatment.

(b) Pursuant to the Pharmaceutical MACT standards for wastewater [40 CFR 63.1256(a)(5)(ii)], the Permittee shall not transfer the affected wastewater or residual unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any affected wastewater or residual removed from affected wastewater received from a source subject to the requirements of this subpart in accordance with the treatment requirements of the Pharmaceutical MACT standards.

D.15.2 Receipt of Offsite Affected Wastewater for Onsite Treatment [40 CFR 63.1256(a)(5)]

(a) Where the Permittee is the transferee, the Permittee shall submit to EPA a written certification that it will manage and treat any affected wastewater or residual removed from affected wastewater received from a source subject to the requirements of this subpart in accordance with the treatment requirements of the Pharmaceutical MACT standards for wastewater [40 CFR 63.1256(a)(5)(ii) and (iv)].

(b) The Permittee may revoke its certification as allowed under 40 CFR 63.1256(a)(5)(iii).

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

D.15.3 Record Keeping and Reporting Requirements

The Permittee shall keep records of all notifications required by Conditions D.15.1 and D.15.2 in accordance with 40 CFR 63.1259(g).

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

D.15.4 Modifications and Construction: Advance Approval of Permit Conditions

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

SECTION D.16 INSIGNIFICANT ACTIVITIES

Facility Description [326 IAC 2-7-5(15)]

The information in this facility description section does not constitute enforceable conditions. The source contains the following regulated insignificant activities that are not included in other sections of this permit:

(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.

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.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in Condition D.16.2(6).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one of the following control devices if the solvent volatility is greater than 4.3 kPa (32 mm Hg or 0.6 psi) measured at 38°C (100°F), or if the solvent is heated to a temperature greater than 48.9°C (120°F):

(A) A freeboard that attains a freeboard ratio of 0.75 or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(6) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(A) Close the cover whenever articles are not being handled in the degreaser.

(B) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(C) 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.

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

D.16.3 Modifications and Construction: Advance Approval of Permit Conditions

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

SECTION E.1 LEAK DETECTION AND REPAIR (LDAR) CONDITIONS FOR BPM PROCESS SYSTEM COMPONENTS

Facility Description [326 IAC 2-7-5(15)]

The following facility information is descriptive information and does not constitute enforceable conditions:

BPM process systems consisted of process operations and non-waste storage serving bulk pharmaceutical manufacturing operations. LDAR applied to BPM process system components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, instrumentation systems, control devices, and closed-vent systems intended to operate in volatile organic hazardous air pollutant and/or volatile organic compound (VOHAP/VOC) service for 300 hours or more during the calendar year. In VOHAP/VOC service meant that a piece or equipment either contained or contacted a fluid (liquid or gas) that was at least 5 percent by weight VOHAP/VOC. The Permittee permanently shut down the BPM production and several of the BPM support operations which included all of the BPM process system components that were subject to LDAR requirements of this section. Only a few of these BPM process system components had been in actual operation for some time after October 1, 2004. Many of those BPM process system components still physically exist on-site; however, all of those BPM process system components are designated for demolition. The applicable requirements described or referred to in this D section apply to the BPM process system components that were described in this section of the October 1, 2004 version of the Part 70 operating permit.

Emission Limitations and Standards

E.1.1 and E.1.2 **Reserved**

Record Keeping and Reporting Requirements

E.1.3 Record Keeping Requirements

(a) From October 1, 2004 to the date on which the Permittee submitted the initial LDAR Report of compliance information in accordance with Condition E.1.3(b)(1) in T165-6462-00009, issued October 1, 2004. Records of information and data related to Condition E.1.1 in T165-6462-00009, issued October 1, 2004, shall be kept in accordance with 40 CFR 63.1255(g), including but not limited to:

(1) Identification of components that were subject to the rule with information indicating their method of compliance, with justifications as appropriate, except that inaccessible, ceramic, or ceramic-lined connectors subject to 40 CFR 63.1255(f)(4) need not be identified;

(2) Schedule for monitoring connectors and valves and the percent connectors and valves found leaking;

(3) Design criteria and any changes to these criteria for each dual mechanical seal system;

(4) List of equipment designated as unsafe to monitor/inspect or difficult to monitor/inspect and a copy of the plan for monitoring or inspecting such equipment;

(5) Equipment complying via the provisions of 40 CFR 63.178(c);

(6) List of equipment added or removed since the last monitoring period;

(7) If monitoring frequencies are adjusted for time in use, records demonstrating the proportion of the time the equipment is in VOC/VOHAP use during the calendar year;

(8) For components in heavy liquid service, records demonstrating that they are in heavy liquid service;

(9) Identification of components exempt because they are in VOHAP/VOC service for less than 300 hours per year; and

(10) Records of reports submitted in accordance with the requirements of Conditions E.1.3(b) and (c) of Part 70 operating permit, dated October 1, 2004.

SECTION E.2 LEAK DETECTION AND REPAIR (LDAR) CONDITIONS FOR WASTE SYSTEM COMPONENTS

Facility Description [326 IAC 2-7-5(15)]

The following facility description of LDAR components subject to this permit section is descriptive information and does not constitute enforceable conditions:

(a) LDAR applies to waste system components consisting of pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, control devices, and closed-vent systems used to comply with this LDAR program, intended to operate in volatile organic hazardous air pollutant and/or volatile organic compound (VOHAP/VOC) service for 300 hours or more during the calendar year. In VOHAP/VOC service means that a piece or equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of total VOHAP/VOC.

(b) LDAR waste system components are located from the point of delivery of affected wastewater or offsite waste materials to the last component prior to entering the hazardous waste combustor or, from the waste storage tanks to the last component prior to being loaded onto tankers for transport offsite. The closed-vent system not used to control emissions from LDAR components is not subject to the conditions of this section, but instead is subject to the conditions in Sections D.11, as applicable.

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

E.2.1 LDAR Standards for Waste System Components [40 CFR 63.691, 326 IAC 2-2]

Except as provided in Condition E.2.2, the following LDAR standards satisfy the requirements of the Volatile Organic Liquid Storage Vessel Standards [40 CFR 60.110b], Off-Site Waste and Recovery Operations (OSWRO) MACT Standards [40 CFR 63.691] and Best Available Control Technology (BACT) requirements [326 IAC 2-2-3]:

(a) The Permittee shall implement the LDAR program under 40 CFR Part 61, Subpart V for all waste system component types listed in item (a) of the facility description section from the point of delivery of affected wastewater or offsite waste materials to the last piece of regulated equipment prior to entering the hazardous waste combustor, or from the waste storage tanks to the last piece of regulated equipment prior to being loaded onto tankers for transport offsite.

(b) Existing waste system components in VOC/VOHAP service are covered under 40 CFR Parts 264 and 265, Subpart BB. Data taken for purposes of Subpart BB shall satisfy the data requirements for entry into the alternate standard at 40 CFR 61.243-1. Monitoring periods are calendar periods as defined at 40 CFR Part 61, Subpart V and 40 CFR Parts 264 and 265, Subpart BB.

(c) Each new or changed waste system component in VOC/VOHAP service identified during the course of each monitoring period shall be incorporated into the existing component list as necessary within 90 days, or by the next LDAR Periodic Report, following the end of the monitoring period for the type of component monitored, whichever is later.

(d) The following waste system components in VOHAP/VOC service shall comply with design standards, shall be operated in accordance with work practice standards, or shall undergo periodic LDAR monitoring in accordance with the provisions cited below. Periodic LDAR monitoring shall be performed in accordance with 40 CFR Part 60, Appendix A, Method 21. The regulatory language cited by reference in this section appears in full in Appendix A.

(1) Pumps shall be operated in accordance with the standard at 40 CFR 61.242-2. This section provides, generally and in part:

(A) Single seal pumps shall undergo periodic monitoring and visual inspections.

(B) Dual mechanical seal pumps with a barrier fluid system shall meet design, operation, inspection, and alarm requirements.

(C) Pumps designed without a shaft penetrating the pump housing shall be monitored initially and annually, but are not subject to other inspections.

(D) Pumps equipped with a closed-vent system capable of capturing and transporting any leakage from the seals back to the process or to a control device are not required to be inspected or monitored.

(E) Pumps designated as unsafe-to-monitor shall be monitored according to a written plan by which they are monitored as frequently as possible during safe-to-monitor times, but not more frequently than otherwise applicable.

(2) Compressors shall be operated in accordance with the standard at 40 CFR 61.242-3. This section provides, generally and in part:

(A) Compressors with barrier fluid seal systems shall meet design, operation, inspection, and alarm requirements.

(B) Compressors equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device are not required to be inspected or monitored.

(C) Compressors designated to operate with an instrument reading of less than 500 ppmv above background shall be monitored initially and annually, and at other times requested by the Administrator.

(3) Pressure relief devices in gas/vapor service shall be operated in accordance with the standard at 40 CFR 61.242-4. This section provides, generally and in part:

(A) Except during pressure releases, pressure relief devices shall be operated with an instrument reading of less than 500 ppmv above background.

(B) After each pressure release, the device shall be returned to a monitored condition of less than 500 ppmv above background within 5 calendar days after the release, except if delay of repair applies.

(C) A rupture disk satisfies Conditions E.2.1(d)(3)(A) and (B) without monitoring if it is replaced within 5 calendar days after each pressure release, except if delay of repair applies.

(D) Any pressure relief device satisfies Conditions E.2.1(d)(3)(A) and (B) without monitoring if it is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device.

(4) Sampling Connection Systems shall be operated in accordance with the standard at 40 CFR 61.242-5. This section provides, generally and in part:

(A) Gases displaced during filling of a sample container are not required to be captured or collected.

(B) Each sampling connection system shall be equipped with a closed-purge, closed-loop or closed-vent system which shall:

(i) Return the purged process fluid directly to the process line; or

(ii) Collect and recycle the purged process fluid; or

(iii) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of 40 CFR 61.242-11; or

(iv) Collect, store, and transport the purged process fluid to a SOCMI/HON waste management unit (40 CFR Part 63, Subpart G) operated according to the provisions which apply to Group 1 wastewater streams, or to a treatment, storage, or disposal facility subject to regulation under 40 CFR Part 262, 264, 265 or 266 (a RCRA unit), or, if the purged fluids are not hazardous waste, to a facility with an appropriate State permit to manage municipal or industrial solid waste.

In-situ sampling systems, and sampling systems without purges, are exempt from the requirements of Conditions E.2.1(d)(4)(B)(i) through (iv).

(5) Open-ended valves or lines shall be operated in accordance with the standard at 40 CFR 61.242-6. This section provides, generally and in part:

(A) Each open-ended valve and line shall be equipped with a cap, blind flange, plug or second valve, which shall seal the open end at all times except when operations require fluid flow through the open-ended valve or line.

(B) If a second valve is used, the valve on the process fluid end shall be closed before the other valve is closed.

(C) If a double block and bleed arrangement is used, the bleed valve or line may remain open during operations requiring venting the line between the block valves, but shall be closed otherwise in accordance with Condition E.2.1(d)(5)(B).

(D) Open-ended valves and lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are not required to comply with Conditions E.2.1(d)(5)(A) through (C).

(E) Open-ended valves or lines containing materials which would autocatalytically polymerize are not required to comply with Conditions E.2.1(d)(5)(A) through (C).

(F) Open-ended valves or lines containing materials which could cause a serious safety hazard if capped or equipped with a double block and

bleed system are not required to comply with Conditions E.2.1(d)(5)(A) through (C).

(6) Valves shall be operated in accordance with the standard at 40 CFR 61.242-7. This section provides, generally and in part:

(A) Each valve shall be monitored monthly, except as provided below.

(B) Any valve may be monitored quarterly, in the first month of the quarter, if it has completed two successive months without a leak, as long as it does not leak.

(C) Each leaking valve shall be monitored monthly after it is repaired until it has completed two successive months without a leak.

(D) Valves designed for no detectable emissions, which have no external actuating mechanism in contact with process fluid, are required only to be monitored initially and annually.

(E) Valves designated as unsafe-to-monitor are required to be monitored only according to a written plan which provides for their monitoring during safe-to-monitor times.

(F) Valves designated as difficult-to-monitor are required to be monitored only according to a written plan that provides for their monitoring at least once per year.

(7) Pressure relief devices in liquid service and connectors shall be operated in accordance with the standard at 40 CFR 61.242-8. This section provides, generally and in part:

(A) If a component presents visual, audible, or olfactory evidence of a leak, the leak shall be deemed repaired without monitoring if the visual, audible, or olfactory evidence has been eliminated.

(B) If there is visual, audible, or olfactory evidence of a leak at one of these components, and the leak is not repaired without monitoring, the component shall be monitored within 5 calendar days to confirm whether a leak is in fact present.

(8) Closed-vent systems and control devices used to comply with Section E.2 of this permit shall be operated in accordance with the standard at 40 CFR 61.242-11, as may be applicable. Operation of these systems in conformance with Section D.11 shall satisfy these requirements.

(9) As an alternative to complying with Condition E.2.1(d)(6), above, valves may comply with the Alternative Standards for Valves - Allowable Percentage of Valves Leaking under 40 CFR 61.243-1. This section provides, generally and in part:

(A) Upon 90 days advance notice to the Administrator, the designated process unit shall have no more than 2.0 percent leaking valves.

(B) All valves in the designated process unit shall be monitored initially upon designation, and annually thereafter.

(C) The annual monitoring of all valves in the designated process unit shall be completed within one week.

(D) Valve leaks detected shall be repaired within 15 days, except if delay of repair applies, in accordance with 40 CFR 61.242-7(d) and (e).

(10) As an alternative to complying with the monitoring requirements in Condition E.2.1(d)(6), above, with respect to monitoring requirements alone, valves may comply with one of the Alternative Standards for Valves - Skip Period Leak Detection and Repair under 40 CFR 61.243-2. This section provides, generally and in part:

(A) All valves in the process unit shall comply initially with the monitoring requirements of Condition E.2.1(d)(6).

(B) After 2 consecutive quarterly monitoring periods with the percent leaking valves in the process unit at less than or equal to 2.0 percent, and upon 90 days advance notice to the Administrator, the designated process unit may begin to skip one of the quarterly monitoring periods; or

After 5 consecutive quarterly monitoring periods with the percent leaking valves in the process unit at less than or equal to 2.0 percent, and upon notice to the Administrator, the designated process unit may begin to skip three of the quarterly monitoring periods.

(C) If for any monitoring period, the percentage of leaking valves exceeds 2.0 percent, all valves in the process unit shall comply with the monitoring requirements of Condition E.2.1(d)(6), but may again elect to use this alternative.

(e) Any visible leak of a liquid containing VOHAP/VOC shall be considered a leak for purposes of the obligation to repair. If it is not clear whether the liquid contains VOHAP/VOC, then Method 21 may be used to confirm whether a leak exists. For each component type, the relevant leak definition in Condition E.2.1(d) shall apply for this purpose. All leaks shall be marked as provided in 40 CFR 61.246(b) with a weatherproof and readily visible identification marked with the equipment identification number. This identification may be removed from the equipment after it has been successfully repaired, except that the identification on a leaking valve may not be removed until the valve has been monitored for 2 successive months without a leak being detected.

(f) The Permittee shall initiate repair of any leak no later than 5 calendar days after identification, and complete the repair within 15 days after identification, except where delay of repair is allowed under 40 CFR 61.242-10. This shall not affect repair periods under Condition E.2.1(d)(3). 40 CFR 61.242-10 provides, generally and in part:

(1) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(2) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the process and that does not remain in VOC/VOHAP service.

(3) Delay of repair for valves will be allowed if emissions from immediate repair attempts would result in greater emissions than delay of repair, and if purged

material generated during the repair is collected and destroyed or recovered in a control device.

(4) Delay of repair for pumps will be allowed if the repair requires the use of a dual mechanical seal system, and is completed within 6 months.

(5) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, but the supplies, although adequately stocked, have been depleted. Delay of repair beyond the second process unit shutdown is not allowed unless the second shutdown occurs sooner than 6 months after the first shutdown.

(g) Alternative means of emission limitations not already included in 40 CFR Part 61, Subpart V may be approved in accordance with 40 CFR 61.242-1(c) and 61.244.

E.2.2 Exceptions to LDAR Standards for Waste System Components

The following equipment types are not subject to the LDAR standards described in Condition E.2.1:

(a) Research and development facilities, activities and equipment;

(b) Components on transportation equipment and containers such as tanker trucks, railroad cars, and drums (40 CFR 63.1256 and 40 CFR Part 63, Subpart DD);

(c) Process systems including non-waste storage and process operations that are not used for handling affected wastewater or offsite waste materials;

(d) Utilities and non-process lines;

(e) Components in vacuum service (40 CFR 61.242-1);

(f) Equipment in VOC/VOHAP service but that is in such service less than 300 hours per calendar year [40 CFR 63.680(c)(3)(iii)]; and

(g) Closed loop heat exchange systems.

Record Keeping and Reporting Requirements

E.2.3 Record Keeping and Reporting Requirements

(a) Records of information and data related to Condition E.2.1 shall be kept in accordance with 40 CFR 61.246, including but not limited to:

(1) Identification of components that are subject to the rule with information indicating their method of compliance, with justifications and signatures as appropriate. No identification is required for welded fittings;

(2) For valves complying via the “skip period” alternative, a schedule for monitoring the valves and the percent valves found leaking during each monitoring period;

(3) Changes to each dual mechanical seal system design and operating criteria, including seal system failure criteria;

(4) List of equipment designated as unsafe to monitor/inspect or difficult to monitor/inspect, with the reason for the designation, and a copy of the plan for monitoring or inspecting such equipment;

(5) Records of leaks detected, repair information, and delays of repair;

(6) Records of compliance tests on equipment (compressors, pumps, or valves) designated for no detectable emissions and for pressure relief devices in gas/vapor service;

(7) Records for closed-vent systems and control devices, subject to Condition E.2.1(d)(8);

(8) Records of information supporting designation that components are not in VOHAP/VOC service or are in vacuum service;

(9) Identification of components exempt because they are in VOC/VOHAP service for less than 300 hours per year;

(10) Records of alternative means of compliance determination; and

(11) Records may be kept in one or more record keeping systems, providing each record is identified by process unit.

(b) Reporting requirements for information and data related to Condition E.2.1 shall be conducted in accordance with 40 CFR 61.247, including:

(1) The Initial LDAR Report of compliance information for this permit shall be submitted within 90 days after issuance of this permit and shall identify in the report each process group and its applicable rules, approximate number of components in VOHAP/VOC service, and method of compliance.

(2) The final independent OSWRO MACT LDAR Periodic Report shall be submitted by July 30, 2004 covering the monitoring period from January 1, 2004 to June 30, 2004.

(3) The first streamlined Waste System LDAR Periodic Report shall be submitted by January 30, 2005 and shall cover the following monitoring periods:

(A) For BACT, this report shall cover the monitoring period from the date of issuance of this permit through December 31, 2004.

(B) For OSWRO MACT, this report shall cover the monitoring period from July 1, 2004 to December 31, 2004.

(4) Subsequent LDAR Periodic Reports shall cover the periods from January 1 to June 30, and July 1 to December 31, respectively. Reports shall be submitted 30 days following the 6-month period. The report shall include any revisions to the information reported earlier if the method of compliance has changed since the last report. The report shall also contain the following information, divided and identified by process unit:

(A) For each month during the period covered by the report, the number of leaks detected for valves, pumps, and compressors and the number not repaired within 15 days, with the facts that explain any delay of repairs, and, where appropriate, why a process unit shutdown was technically infeasible;

(B) The results of all performance tests and monitoring to determine compliance with the alternative standards for valves at 40 CFR 61.243-1 and 61.243-2;

(C) Results of all monitoring and performance tests required to determine compliance with no detectable emissions; and

(D) The dates of process unit shutdowns which occurred during the reporting period.

(c) Reports shall be submitted using the reporting forms located at the end of this permit, or their equivalent.

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

E.2.4 Modifications and Construction: Advance Approval of Permit Conditions

(a) The Permittee may modify any existing emission units 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 section, and the Permittee shall comply with the Change Management and Flexible Permit provisions in Section F.1 of this permit.

(b) The Permittee may construct and install new emission units of the types described in this section 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 new emission units are subject to the same applicable requirements listed in this section, and the Permittee shall comply with the Change Management and Flexible Permit provisions in Section F.1 of this permit.

SECTION F.1 CHANGE MANAGEMENT AND FLEXIBLE PERMIT CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

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

(a) The operations in the areas of the plant site listed below are subject to the change management and flexible permit conditions described in this section. These conditions apply to all emission units listed in the specific sections of the permit listed below and emission units added to the site pursuant to the provisions of this section:

(1) D.8 Waste Storage Tank Operations
(2) D.9 Waste Containers
(3) D.11 Control Systems – RTO Operations
(4) D.12 Incineration – TO3/TO4 Liquid Waste Incinerators
(5) E.2 LDAR – Waste System Components

(b) The operations in the areas listed below are not subject to the change management and flexible permit conditions in this section:

(1) D.1 Utilities
(2) D.2 AHM – Fermentation
(3) D.3 AHM – Product Recovery
(4) D.4 AHM – Product Finishing
(5) D.5 BPM – Production Operations
(6) D.6 BPM – Solvent Recovery Operations
(7) D.7 BPM – Solvent Storage Tank Operations
(8) D.10 BPM – Individual Drain Systems
(9) D.13 Incineration – Bartlett-Snow Solid Waste Incinerator
(10) D.14 General Wastewater Conditions
(11) D.15 Waste Transfer Activities
(12) D.16 Insignificant Activities (described in Section A and outside the operations in the areas of the plant site that are subject to the change management and flexible permit conditions)
(13) E.1 LDAR – BPM Process System Components

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

F.1.1 Emission Limits [326 IAC 2-2]

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

(b) Fluorides emissions from the facilities operating under the flexible permit conditions shall not exceed 9 tons per 12-month period, rolled on a calendar month basis, where the limit shall be applied as follows:

(1) 5.5 tons of fluorides emissions from the TO3/TO4 liquid incinerators; and

(2) 3.5 tons of fluorides emissions from the RTOs.

(c) NO_X emissions from the facilities operating under the flexible permit conditions shall not exceed 650 tons per 12-month period, rolled on a calendar month basis, where the limit shall be applied as follows:

(1) 350 tons of NO_X emissions from the TO3/TO4 liquid incinerators, and

(2) 300 tons of NO_X emissions from the RTOs.

(d) SO_2 emissions from the facilities operating under the flexible permit conditions shall not exceed 275 tons per 12-month period, rolled on a calendar month basis, where the limit shall be applied as follows:

(1) 200 tons of SO_2 emissions from the TO3/TO4 liquid incinerators, and

(2) 75 tons of SO_2 emissions from the RTOs.

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

F.1.2 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 in Sections D.8, D.9, D.11, D.12, and E.2 of this permit. If actual emissions do not exceed the limits in Section F.1.1, 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 without triggering the administrative review processes described above:

(1) Support Operations:

(A) A change in the method of operation to a process or existing equipment;

(B) Piping changes, including but not limited to, process piping, waste piping and fume transport piping;

(C) A physical change to existing equipment;

(D) Reconstruction or replacement of existing equipment, including but not limited to, storage tanks and container transfer operations;

(E) Installation of new equipment, including but not limited to, storage tanks~~,~~ and container transfer operations;

(F) Reconstruction or replacement of existing storage tanks; and

(G) Installation of new storage tanks.

(2) TO3/TO4 Liquid Waste Incinerators:

(A) A change in waste materials disposed in the incinerators;

(B) A change in the use of portable containers, including but not limited to, drums, melons, and tank trailers;

(C) A change in the method of operation that does not affect compliance with 40 CFR Part 63, Subpart EEE;

(D) Piping changes;

(E) A physical change that does not affect compliance with 40 CFR Part 63, Subpart EEE;

(F) Reconstruction or replacement of incinerator components and support equipment, including but not limited to, cooling towers and waste container management; and

(G) Installation of new incinerator equipment components, support equipment or emission control equipment.

(b) Advance Approval and Applicable Requirements
In addition to the emission limits identified in Condition F.1.1 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.8, D.9, D.11, D.12 and E.2 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.1.3 Carbon Monoxide (CO) Emission Limit Determination

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

(a) The following requirements apply to the RTOs and the TO3/TO4 liquid waste incinerators:

(1) **CO measurement**: The Permittee shall measure CO concentration in the exhaust from the RTOs and TO3/TO4 liquid waste incinerators with a CO continuous emission monitoring system (CEMS) or follow the data substitution requirements in Condition F.1.3(a)(5).

(2) **Flow rate measurement**: The Permittee shall measure the actual exhaust gas flow rate from the RTOs and TO3/TO4 liquid waste incinerators with a flow monitoring system or follow the data substitution requirements in Condition F.1.3(a)(5).

(3) **Mass emission calculation**: The Permittee shall calculate CO emissions, in tons, each calendar month by using the CO concentration data and flow rate data.

(4) **Minimum data collection requirements:**

(A) For the RTOs, the requirements for monitoring and recording CO concentrations and exhaust gas flow rate are described in Section D.11.

(B) For the TO3/TO4 liquid waste incinerators, the requirements for monitoring and recording CO concentrations and exhaust gas flow rate are described in Section D.12.

(5) **Data substitution:**

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute CO concentration measurement obtained prior to the calibration in lieu of actual readings from the CO CEMS.

(B) During periods of flow meter calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute exhaust 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 CO data collection; or any periods when CO CEMS may not be operating and its operation is not required for compliance with Sections D.11 and D.12 (such as, when the RTOs are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the CO CEMS:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the CO emissions determined by multiplying the actual natural gas flow rate [in million cubic feet (mmcf)] for the RTOs and either the actual natural gas flow rate (in mmcf) or the maximum natural gas flow rate (0.0010833 mmcf) for each of the TO3/TO4 liquid waste incinerators, by the EPA AP-42 emission factor of 84 lb/mmcf for external combustion sources.

(ii) When burning waste fumes or incinerating a waste stream, the following CO concentrations shall be substituted:

(a) RTOs CO concentration = 73 ppmv
(b) TO3/TO4 CO concentration = 100 ppmvd

(D) During periods of flow meter maintenance, malfunction, or repair; other periods of invalid exhaust gas flow rate data collection; or any periods when flow meter may not be operating and its operation is not required for compliance with Sections D.11 and D.12 (such as, when the RTOs are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the CO emissions determined by multiplying the actual natural gas flow rate (in mmcf) for the RTOs and either the actual natural gas flow rate (in mmcf) or the maximum natural gas flow rate (0.0010833 mmcf) for each of the TO3/TO4 liquid waste incinerators, by the EPA AP-42 emission factor of 84 lb/mmcf for external combustion sources.

(ii) When burning waste fumes or incinerating a waste stream, the following exhaust gas flow rates shall be substituted:

(a) RTOs exhaust gas flow rate = 101,600 scfm
(b) TO3/TO4 exhaust gas flow rate = 14,560 dscfm

F.1.4 Fluorides Emission Limit Determination

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

(a) The following requirements apply to the RTOs and the TO3/TO4 liquid waste incinerators:

(1) **Uncontrolled hydrogen fluoride emissions**: The Permittee shall determine the mass of fluorine atoms emitted to the RTOs and TO3/TO4 liquid waste incinerators [as components of fluorine containing compounds] by support operations, by using engineering calculation methods based on ideal gas law equations, stoichiometry and mass balance. All fluorine atoms shall be considered emitted as hydrogen fluoride (HF) after combustion in the RTOs or the TO3/TO4 liquid waste incinerators.

(2) **HF control efficiency:** The Permittee shall base fluorides emissions on an RTO and TO3/TO4 scrubber control efficiency of 98%. If the monitoring data is not available or indicates the scrubbers are not achieving this control efficiency, the Permittee shall use a control efficiency of zero percent (0%).

(3) **Emission calculation**: The Permittee shall calculate fluorides emissions, in tons, for each calendar month by multiplying the amount of HF created by combustion of the fluorine atoms in the RTOs and TO3/TO4 liquid waste incinerators by the respective HF control efficiency.

F.1.5 Nitrogen Oxides (NO_X) Emission Limit Determination

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

(a) The following requirements apply to the RTOs and the TO3/TO4 liquid waste incinerators:

(1) **NO_X measurement**: The Permittee shall measure NO_X concentration in the exhaust with a NO_X continuous emission monitoring system (CEMS) or follow the data substitution requirements in Condition F.1.5(a)(4).

(2) **Flow rate measurement**: The Permittee shall measure the actual exhaust gas flow rate from the RTOs and the TO3/TO4 liquid waste incinerators with a flow monitoring system or follow the data substitution requirements in Condition F.1.5(a)(4).

(3) **Emission calculation**: The Permittee shall calculate NO_X emissions, in tons, each calendar month by using the NO_X concentration data and flow rate data.

(4) **Data substitution**:

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute NO_X concentration measurement obtained prior to the calibration in lieu of actual readings from the NO_X CEMS.

(B) During periods of flow meter calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute exhaust 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 NO_X data collection; or any periods when NO_X CEMS

may not be operating and its operation is not required for compliance with Sections D.11 and D.12 (such as, when the RTOs or TO3/TO4 incinerators are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the NO_X CEMS:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the NO_X emissions determined by multiplying the actual natural gas flow rate (in mmcf) for the RTOs and either the actual natural gas flow rate (in mmcf) or the maximum natural gas flow rate (0.0010833 mmcf) for each of the TO3/TO4 liquid waste incinerators, by the EPA AP-42 emission factor of 140 lb/mmcf for external combustion sources.

(ii) When burning waste fumes or incinerating a waste stream, the following NO_X concentrations shall be substituted:

a. RTOs NO_X concentration = 91 ppmv
b. TO3/TO4 NO_X concentration = 975 ppmvdc

(D) During periods of flow meter maintenance, malfunction, or repair; other periods of invalid exhaust gas flow rate data collection; or any periods when flow meter may not be operating and its operation is not required for compliance with Sections D.11 and D.12 (such as, when the RTOs are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the NO_X emissions determined by multiplying the actual natural gas flow rate (in mmcf) for the RTOs and either the actual natural gas flow rate (in mmcf) or the maximum natural gas flow rate (0.0010833 mmcf) for each of the TO3/TO4 liquid waste incinerators, by the EPA AP-42 emission factor of 140 lb/mmcf for external combustion sources.

(ii) When burning waste fumes or incinerating a waste stream, the following exhaust gas flow rates shall be substituted:

a. RTOs exhaust gas flow rate = 101,600 scfm
b. TO3/TO4 exhaust gas flow rate = 14,560 dscfm

(5) **Minimum data collection requirements:**

(A) For the RTOs, the requirements for monitoring and recording NO_X concentrations and exhaust gas flow rate are described in Section D.11.

(B) For the TO3/TO4 liquid waste incinerators, the requirements for monitoring and recording NO_X concentrations and exhaust gas flow rate are described in Section D.12.

F.1.6 Sulfur Dioxide (SO_2) Emission Limit Determination

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

(a) The following requirements apply to the TO3/TO4 liquid waste incinerators, and the RTOs when using CEMS to comply with the SO_2 concentration limitations:

(1) **SO_2 measurement**: The Permittee shall measure SO_2 concentration in the exhaust with a SO_2 continuous emission monitoring system (CEMS) or follow the data substitution requirements in Condition F.1.6(a)(4).

(2) **Flow rate measurement**: The Permittee shall measure the actual exhaust gas flow rate from the RTOs and TO3/TO4 liquid waste incinerators with a flow monitoring system or follow the data substitution requirements in Condition F.1.6(a)(4).

(3) **Emission calculation**: The Permittee shall calculate SO_2 emissions, in tons, each calendar month by using the SO_2 concentration data and flow rate data.

(4) **Data substitution**:

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute SO_2 concentration measurement obtained prior to the calibration in lieu of actual readings from the SO_2 CEMS.

(B) During periods of flow meter calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute exhaust 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 SO_2 data collection; or any periods when SO_2 CEMS may not be operating and its operation is not required for compliance with Sections D.11 and D.12 (such as, when the RTOs and TO3/TO4 incinerators are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the SO_2 CEMS:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the SO_2 emissions determined by multiplying the actual natural gas flow rate (in mmcf) for the RTOs and either the actual natural gas flow rate (in mmcf) or the maximum natural gas flow rate (0.0010833 mmcf) for each of the TO3/TO4 liquid waste incinerators, by the EPA AP-42 emission factor of 0.6 lb/mmcf for external combustion sources.

(ii) When burning waste fumes or incinerating a waste stream, the following SO_2 concentrations shall be substituted:

a. RTOs SO_2 concentration = 100 ppmv
b. TO3/TO4 SO_2 concentration = 500 ppmvd

(D) During periods of flow meter maintenance, malfunction, or repair; other periods of invalid exhaust gas flow rate data collection; or any periods when flow meter may not be operating and its operation is not required for compliance with Sections D.11 and D.12 (such as, when the RTOs are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the SO_2 emissions

determined by multiplying the actual natural gas flow rate (in mmcf) for the RTOs and either the actual natural gas flow rate (in mmcf) or the maximum natural gas flow rate (0.0010833 mmcf) for each of the TO3/TO4 liquid waste incinerators, by the EPA AP-42 emission factor of 0.6 lb/mmcf for external combustion sources.

(ii) When burning waste fumes or incinerating a waste stream, the following exhaust gas flow rates shall be substituted:

a. RTO exhaust gas flow rate = 101,600 scfm
b. TO3/TO4 exhaust gas flow rate = 14,560 dscfm

(5) **Minimum data collection requirements:**

(A) When using SO_2 CEMS for the RTOs, the requirements for monitoring and recording SO_2 concentrations and exhaust gas flow rate are described in Section D.11.

(B) For the TO3/TO4 liquid waste incinerators, the requirements for monitoring and recording SO_2 concentrations and exhaust gas flow rate are described in Section D.12.

(b) The following requirements apply to the RTOs when complying with the 97.5% SO_2 emission reduction requirements:

(1) **SO_2 emission calculation for natural gas usage**: The Permittee shall determine the amount of natural gas burned by the RTOs each calendar month. The Permittee shall calculate SO_2 emissions from natural gas combustion, in tons, each calendar month by multiplying the monthly natural gas usage by an emission factor of 0.6 lb/mmcf and converting the resulting emissions to tons.

(2) **SO_2 emission calculation from operations exhausting to the RTOs**: The Permittee shall determine the mass of sulfur atoms emitted to the RTOs [as components of sulfur containing compounds] by support operations, by using engineering calculation methods based on ideal gas law equations, stoichiometry and mass balance. All sulfur atoms shall be considered emitted as sulfur dioxide (SO_2) after combustion in the RTOs. The Permittee shall base SO_2 emissions on an RTO scrubber control efficiency of 97.5%. If the monitoring data is not available or indicates the scrubbers are not achieving this control efficiency, the Permittee shall use a control efficiency of zero percent (0%).

(3) **Emission calculation**: The Permittee shall calculate sulfur dioxide emissions, in tons, for each calendar month by multiplying the amount of SO_2 created by combustion of the sulfur atoms in the RTOs by the respective SO_2 control efficiency.

(4) **Reserved.**

(5) **Data substitution**: During periods of time when the Permittee is unable to determine natural gas usage because of auditing, calibration, maintenance, malfunction, repair, or other periods when the natural gas meters for the RTOs are not collecting valid data, the Permittee shall determine SO_2 emissions based on a natural gas consumption rate of 0.036 mmscf/hour [based on the nominal heat input rate of 36 MMBtu/hr per RTO].

F.1.7 Volatile Organic Compound (VOC) Emission Limit Determination

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

(a) The following requirements apply to the RTOs when compliance is based on the 20 ppmv alternative standard:

(1) **VOC measurement**: The Permittee shall directly measure TOC concentration, as methane**,** in the exhaust gas using a TOC continuous emission monitoring system (CEMS) or follow the data substitution requirements in Condition F.1.7(a)(4). The Permittee shall assume VOC, a subset of total organic carbon (TOC), is equal to TOC.

(2) **Flow rate measurement**: The Permittee shall measure the actual exhaust gas flow rate from the RTOs with a flow monitoring system or follow the data substitution requirements in Condition F.1.7(a)(4).

(3) **Emission calculation**: The Permittee shall calculate VOC emissions, in tons, each calendar month by using the TOC concentration data, measured as methane (Molecular Weight = 16), and exhaust gas flow rate data.

(4) **Data substitution**:

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute TOC concentration measurement obtained prior to the calibration in lieu of actual readings from the TOC CEMS.

(B) During periods of flow meter calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute exhaust 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 TOC data collection; or any periods when TOC CEMS may not be operating and its operation is not required for compliance with Section D.11 (such as, when the RTOs are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the TOC CEMS:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the VOC emissions determined by multiplying the actual natural gas flow rate (in mmcf) by the EPA AP-42 emission factor of 5.5 lb/mmcf for external combustion sources.

(ii) When burning waste fumes, the following TOC concentration shall be substituted:

RTOs TOC concentration = 20 ppmv (as methane)

(D) During periods of flow meter maintenance, malfunction, or repair; other periods of invalid exhaust gas flow rate data collection; or any periods when flow meter may not be operating and its operation is not required for compliance with Section D.11 (such as, when the RTOs are burning only natural gas), the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the Permittee shall substitute, in one-minute increments, the VOC emissions determined by multiplying the actual natural gas flow rate (in mmcf) by the EPA AP-42 emission factor of 5.5 lb/mmcf for external combustion sources.

(ii) When burning waste fumes, the following exhaust gas flow rate shall be substituted:

RTOs exhaust gas flow rate = 101,600 scfm

(5) **Minimum data collection requirements:**

The requirements for monitoring and recording VOC concentrations and exhaust gas flow rate are described in Section D.11.

(6) **Emissions during RTO bypass periods**: The Permittee shall include any known VOC emissions from waste storage tanks not emitted through the RTO due to diversions in the fume transport system. The Permittee may use engineering calculation methods based on ideal gas law equations, stoichiometry, or mass balance to estimate these emissions.

(b) The following requirements apply to the RTOs when compliance is based on the 98% control efficiency standard:

(1) **VOC emission calculation for natural gas usage**: The Permittee shall determine the amount of natural gas burned by the RTOs each calendar month. The Permittee shall calculate VOC emissions from natural gas combustion, in tons, each calendar month by multiplying the monthly natural gas usage by an emission factor of 5.5 lb/mmcf and converting the resulting emissions to tons.

(2) **VOC emission calculation from support operations exhausting to the RTOs:** The Permittee shall use the following emission factors for estimating uncontrolled VOC emissions from the support operations (waste storage tanks):

Activity	VOC Emission Factor
	C9 Tank Farm
Primary Waste Charging	1.74 lb/1,000 gal
Secondary Waste Charging	1.905 lb/1,000 gal
Diurnal Losses from Primary Waste Tanks	14.32 lb/day
Diurnal Losses from Secondary Waste Tanks	45.26 lb/day

The Permittee shall base VOC emissions on an RTO control efficiency of 98%**.** If the monitoring data is not available or indicates the RTO is not achieving this control efficiency, the Permittee shall use a control efficiency of zero percent (0%).

(3) **Data substitution**: During periods of time when the Permittee is unable to determine natural gas usage because of auditing, calibration, maintenance, malfunction, repair, or other periods when the natural gas meters for the RTOs are not collecting valid data, the Permittee shall determine VOC emissions based on a natural gas consumption rate of 0.036 mmscf/hour [based on the nominal heat input rate of 36 MMBtu/hr per RTO].

(c) The following requirements apply to the TO3/TO4 liquid waste incinerators:

(1) **Waste stream concentrations:** The Permittee shall use 56.3% by weight as the VOC concentration in the primary waste stream and 5.55% by weight as the VOC concentration in the secondary waste stream.

(2) **Waste stream density:** The Permittee shall use 7.51 lb/gal as the density of the primary waste stream and 8.34 lb/gal as the density of the secondary waste stream, for calculating the amount of wastewater incinerated in tons.

(3) **Amount of waste incinerated:** The Permittee shall determine the amount of primary and secondary wastewater incinerated, in gallons, each month. The Permittee shall convert the amount of primary and secondary wastewater incinerated to pounds by multiplying the amount in gallons by the primary and secondary waste stream density, respectively.

(4) The Permittee shall determine the mass of volatile organic compounds incinerated each month by multiplying the amount of primary and secondary wastewater incinerated during the month, in pounds, by the concentration of volatile organic compounds in the primary and secondary waste streams.

(5) The Permittee shall determine the VOC emissions by multiplying the total mass of VOC incinerated each month by a 99.99% destruction efficiency and converting the resulting emissions to tons.

(6) VOC emission calculation for natural gas usage: The Permittee shall determine the amount of natural gas burned by the TO3/TO4 incinerators each calendar month. The Permittee shall calculate VOC emissions from natural gas combustion, in tons, each calendar month by multiplying the monthly natural gas usage by an emission factor of 5.5 lb/mmcf and converting the resulting emissions to tons.

(7) Data substitution: During periods of time when the Permittee is unable to determine natural gas usage because of auditing, calibration, maintenance, malfunction, repair, or other periods when the natural gas meters for the TO3/TO4 incinerators are not collecting valid data, the Permittee shall determine VOC emissions based on a natural gas consumption rate of 0.085 mmscf/hour [based on the nominal heat input rate of 85 MMBtu/hr per incinerator].

(d) **Reserved**

(e) Fugitive VOC emissions from Support Operations: The Permittee shall determine monthly fugitive VOC emissions using the following calculation methods:

(1) Emission factors: The Permittee shall develop emission factors to calculate monthly fugitive VOC emissions. The emission factors shall be developed according to the following methods.

(A) For each VOC compound that the Permittee reports release of in the annual SARA Title III TRI report ("reportable SARA VOCs"), the Permittee shall develop a compound-specific emission factor, expressed in pounds of emissions per 100 pounds of solvent usage. Reportable SARA VOC emission factors shall be derived from data used to submit SARA reports. Each compound-specific fugitive emission factor for reportable SARA VOCs shall be updated and applied to monthly fugitive emission calculations beginning July 1 of each year.

(B) For VOC compounds not reported under SARA Title III, the Permittee shall use a generic fugitive emission factor, expressed in pounds of emissions per 100 pounds of solvent usage. The generic fugitive emission factor shall be equal to the highest representative emission factor developed in (A) above for a reportable SARA VOC used as a raw material in production processes. In the alternative, the Permittee may develop and apply a compound-specific emission factor for a compound not reported under SARA Title III. The generic fugitive emission factor and any compound-specific fugitive emission factor shall be updated and applied to monthly fugitive emission calculations beginning July 1 of each year.

(2) Emission calculation method: For VOCs with a compound-specific emission factor described in Conditions F.1.7(e)(1)(A) and (B), the Permittee shall calculate monthly fugitive VOC emissions by multiplying the compound-specific emission factor by the corresponding compound-specific monthly solvent usage. For VOCs without a compound-specific emission factor, the Permittee shall calculate monthly fugitive VOC emissions by multiplying the generic emission factor described in Condition F.1.7(e)(1)(B) by the monthly solvent usage of those compounds.

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

F.1.8 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.1.3 through F.1.7.

(b) The Permittee shall submit a quarterly report of actual emissions of CO, fluorides, NO_X, SO_2, and VOC, as determined in accordance with Sections F.1.3 through F.1.7.

F.1.9 Change Management Evaluation Process

The Permittee shall employ a change management evaluation process to determine whether changes will affect compliance with the requirements of the Pharmaceutical MACT standards [40 CFR Part 63, Subpart GGG]. This change evaluation process shall include the following elements:

(a) New processes, process changes, and physical changes to process equipment that increase hazardous air pollutant emissions from process vents, wastewater streams, and storage tanks will be considered “new process operating scenarios”. Changes which affect fugitive emissions equipment components will not be considered new operating scenarios and will be managed per the relevant provisions of the leak detection and repair program, which includes provisions addressing the addition of, and changes to, components.

(b) Each new process operating scenario [as defined in Condition F.1.9(a)] will be reviewed to determine whether the change will affect compliance with the emission standards under the Pharmaceutical MACT requirements. Compliance with the following standards will be evaluated: process vent standards [40 CFR 63.1254]; storage tank standards [40 CFR 63.1253]; and wastewater streams [40 CFR 63.1256].

(c) Documentation of the evaluation of each new process operating scenario will contain the following information:

(1) For new process vents, a statement regarding the method for complying with 40 CFR 63.1254. The statement shall include an analysis regarding the need for conducting a compliance demonstration.

(2) For new storage tanks, a statement regarding the method for complying with 40 CFR 63.1253. The statement shall include an analysis regarding the need for conducting a compliance demonstration.

(3) For new or changed wastewater streams, a statement regarding the method for complying with 40 CFR 63.1256. The statement shall include an analysis that shows whether the new or changed wastewater stream fits within an existing compliance demonstration, or whether another demonstration must be conducted.

(d) If a new process-operating scenario will trigger applicable requirements not described in this permit or compliance with applicable requirements will be demonstrated by methodologies not described in this permit, this permit must be revised pursuant to 326 IAC 2-7-12.

F.1.10 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.

(b) Pharmaceutical MACT operating scenarios:

(1) Pursuant to 40 CFR 63.1259(c), for all equipment subject to the pharmaceutical MACT requirements, the Permittee shall develop a record describing operating scenarios that may occur in the operating areas that are subject to pharmaceutical MACT requirements.

(2) Pursuant to 40 CFR 63.1260(f)(4), for all equipment subject to the pharmaceutical MACT requirements, the Permittee shall list all known operating scenarios that may occur in the operating areas that are subject to pharmaceutical MACT requirements in the notification of compliance status report.

(3) Pursuant to 40 CFR 63.1259(b)(8), for all equipment subject to the pharmaceutical MACT requirements, the Permittee shall maintain a log that records which operating scenarios have been put into effect in the operating areas that are subject to pharmaceutical MACT requirements.

F.1.11 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).

F.1.12 Inclusion of Site Modifications in Pharmaceutical MACT Periodic Report

(a) Pursuant to 40 CFR 63.1260(g)(2)(vii), the Permittee shall include in the Periodic Report information for each new operating scenario operated since the time period covered by the last Periodic Report. These reports shall be submitted as required in the Record Keeping and Reporting Requirements of Section D.11.

(b) Pursuant to 40 CFR 63.1260(h)(1), whenever a new process is introduced, or a change in any of the information submitted in the Notification of Compliance Status Report, the Permittee shall submit the following information with the next Periodic Report as required in the Record Keeping and Reporting Requirements of Section D.11:

(1) A brief description of the process change;

(2) A description of any modifications to standard procedures or quality assurance procedures;

(3) Revisions to any of the information reported in the original Notification of Compliance Status Report under 40 CFR 63.1260(f); and

(4) Information required by the Notification of Compliance Status Report under 40 CFR 63.1260(f) for changes involving the addition of processes or equipment.

(c) Pursuant to 40 CFR 63.1260(h)(2), the Permittee must submit a report 60 days before the scheduled implementation date of either of the following:

(1) Any change in the activity covered by the Precompliance report.

(2) A change in the status of a control device from small to large.

F.1.13 Reports of Changes Affected by Hazardous Waste Combustor MACT

(a) Pursuant to 40 CFR 63.1206(b)(5)(iii), a change is defined as any change in design, operation or maintenance practices that were documented in the comprehensive

performance test plan, Notification of Compliance, or startup, shutdown and malfunction plan.

(b) For changes that may adversely affect compliance with emission limits for pollutants which are not monitored with a CEMS, the Permittee shall:

(1) Notify the Administrator at least 60 days prior to the change, unless circumstances are documented that dictate that such prior notice is not reasonably feasible.

(2) Conduct a comprehensive performance test under the requirements of 40 CFR 63.1207(f)(1) and (g)(1) to document compliance with the affected emission standard(s) and establish operating parameter limits as required under 40 CFR 63.1209, and submit the Administrator a Notification of Compliance under 40 CFR 63.1207(j) and 40 CFR 63.1210(d); and

(3) Not burn hazardous waste for more than a total of 720 hours after such change is made and prior to submitting the Notification of Compliance unless the Administrator provides a written approval to burn hazardous waste in the interim.

(4) For changes that will not affect compliance, the Permittee shall document the change in the operating record upon making such change. The Permittee shall revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and startup, shutdown and malfunction plan to reflect these changes.

Other Flexible Permit Requirements

F.1.14 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.8, D.9, D.11 and D.12 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. The Permittee may provide, in its application for renewal of the permit, 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.1.15 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.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section D.1 – Utilities Operations
Quarterly Coal Characteristics and Consumption Report

Source Name: Eli Lilly and Company, Clinton Laboratories
Source Address: 10500 South State Road 63, Clinton, Indiana 47842
Mailing Address: P.O. Box 99, Clinton, Indiana 47842
Part 70 Permit No.: T165-6462-00009
Facility: Coal-fired boiler (C31 BLR01)
Parameter: SO_2 emissions
Limit: 4.72 lb/MMBtu

Quarter: _____ Year: _____

Month	Average Sulfur Content (% Wt.)	Average Heating Value (Btu/lb)	Total Coal Consumption (tons)	Average SO_2 Emission Rate (lb/MMBtu)

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Sections D.11 & D.12 – Control Device CMS Operations
Streamlined CMS Periodic Report

Source Name: Eli Lilly and Company, Clinton Laboratories
Source Address: 10500 South SR 63, Clinton, Indiana 47842
Mailing Address: P.O. Box 99, Clinton, Indiana 47842
Part 70 Permit No.: T165-6462-00009

Quarter: _____ Year: _____

PART 1: CMS Summary

Regulated Entity	CMS	Brief Description	Limits/UOM	Manufacturer/ Model #	Last Audit/Annual Calibration Date	Description of Changes in CMS/CEMS

PART 2: CMS Exceedance/Excess Emission Summary

Regulated Entity	Operating Time (days)	CMS	Exceedance/Excess Emission Time by Cause (days)					Total Exceedance/ Excess Emission Time (days)	Exceedances/ Excess Emissions (as % of Operating Time)
			Startup/ Shutdown	Control Equipment Problem	Process Problem	Other Known	Other Unknown		

PART 3: CMS Downtime Summary

Regulated Entity	Operating Time (hours)	CMS	Downtime by Cause (hours)					Total Downtime (hours)	Downtime (as % of Operating Time)
			Monitoring Equipment Malfunctions	Nonmonitoring Equipment Malfunctions	QA/QC Activities	Other known	Other Unknown		

PART 4: CMS Downtime Details, If Applicable

Control Device: _____
CMS/CEMS: _____
Operating Time: _____

Start Date	Start Time	End Date	End Time	Downtime Type	SSM (yes/no)	Nature and Cause of Malfunction	Nature of Repairs or Adjustment / Corrective Actions / Preventive Measures

Control Device: _____
CMS/CEMS: _____
Operating Time: _____

Start Date	Start Time	End Date	End Time	Downtime Type	SSM (yes/no)	Nature and Cause of Malfunction	Nature of Repairs or Adjustment / Corrective Actions / Preventive Measures

PART 5: CMS Excursion Summary, If Applicable

Regulated Entity	Operating Time (days)	CMS	Number of Excursions	% Excursion

PART 6: CMS Excursion Details, If Applicable

Control Device: _____
CMS/CEMS: _____
Operating Time: _____

Date	Duration (days)

PART 7: Bypass Summary

Regulated Entity	Date	Start Time	Building or Fume Stream	Duration (hrs)	SSM Event?

PART 8: SSM Summary

REGULATED SOURCE	DATE	DURATION (hours)	SSM EVENT TYPE	SSM PLAN FOLLOWED?	NOTES

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Section E – Leak Detection and Repair (LDAR) Program
Streamlined LDAR Periodic Report

Source Name: Eli Lilly and Company, Clinton Laboratories
Source Address: 10500 South SR 63, Clinton, Indiana 47842
Mailing Address: P.O. Box 99, Clinton, Indiana 47842
Part 70 Permit No.: T165-6462-00009

Period: _____ Year: _____

LDAR Report for Waste Components

Process Unit:
Equipment Type:
Service:

Monitoring Period	Number Tested	Number Leakers	Percent Leakers	Process Unit Shutdown Periods

Number of Components	Number Added	Number Removed

Process Unit:
Equipment Type:
Service:

Monitoring Period	Number Tested	Number Leakers	Percent Leakers	Process Unit Shutdown Periods

Number of Components	Number Added	Number Removed

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE 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 SR 63, Clinton, Indiana 47842
Mailing Address:	P.O. Box 99, Clinton, Indiana 47842
Part 70 Permit No.:	T165-6462-00009

This form consists of 2 pages

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

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

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

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Eli Lilly and Company, Clinton Laboratories
Source Address: 10500 South SR 63, Clinton, Indiana 47842
Mailing Address: P.O. Box 99, Clinton, Indiana 47842
Part 70 Permit No.: T165-6462-00009

Months: _____ to _____ Year: _____

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

Form Completed By: _____
Title/Position: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Eli Lilly and Company, Clinton Laboratories
Source Address: 10500 South SR 63, Clinton, Indiana 47842
Mailing Address: P.O. Box 99, Clinton, Indiana 47842
Part 70 Permit No.: T165-6462-00009

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

Please check what document is being certified:

Annual Compliance Certification Letter

Test Result (specify) _____

Report (specify) _____

Notification (specify) _____

Affidavit (specify) _____

Other (specify) _____

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

Submitted by:

Title/Position:

Signature:

Date:

Phone:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section F.1 – Change Management and Flexible Permit Requirements
Quarterly Emission Limit Report

Source Name: Eli Lilly and Company, Clinton Laboratories
Source Address: 10500 South SR 63, Clinton, Indiana 47842
Mailing Address: P.O. Box 99, Clinton, Indiana 47842
Part 70 Permit No.: T165-6462-00009
Facility: RTOs, TO3/TO4, and Support Operations Fugitives
Parameter: Emission Limits for VOC, CO, NO_X, SO_2, and Fluorides
Limit:

Pollutant	RTOs (tons/yr)	TO3/TO4 Incinerators (tons/yr)	Support Operations Fugitives (tons/yr)	TOTAL (tons/yr)
VOC	N/A	N/A	N/A	300
CO	N/A	N/A	N/A	300
NO_X	300	350	N/A	650
SO_2	75	200	N/A	275
Fluorides	3.5	5.5	N/A	9

The attached spreadsheet provides the monthly actual emissions for operating areas subject to flexible permit requirements. The information is used to determine the emission limits provided above. This emission summary report is:

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report (see next page)

Quarter: _____ Year: _____

Pollutant	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
RTOs									
VOC, Point									
CO									
NO_X									
SO_2									
Fluorides									
TO3/TO4 Liquid Waste Incinerators									
VOC, Point									
CO									
NO_X									
SO_2									
Fluorides									
Support Operations									
VOC, Fugitive									
Total									
VOC (Point + Fugitive)									
CO									
NO_X									
SO_2									
Fluorides									

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a
Part 70 Significant Source and Significant Permit Modification

Source Description and Location

Source Name:	Eli Lilly and Company, Clinton Laboratories Facility
Source Location:	10500 South State Road 63, Clinton, Indiana 47842
County:	Vermillion
SIC Code:	2833, 2834, 2879
Operating Permit No.:	T165-6462-00009
Operating Permit Issuance Date:	October 1, 2004
Significant Source Modification No.:	165-25636-00009
Significant Permit Modification No.:	165-25674-00009
Permit Reviewer:	Mehul Sura

Public Notice Information

On June 25, 2008, the Office of Air Quality (OAQ) had a notice published in the *Daily Clintonian,* Clinton, Indiana, stating that IDEM had received applications from Eli Lilly and Company, Clinton Laboratories Facility located at 10500 South State Road 63, Clinton, Indiana 47842 for the significant source and significant permit modification to their Part 70 Operating Permit, issued on October 1, 2004. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On July 21, 2008, Eli Lilly and Company, Clinton Laboratories Facility submitted a comment on the proposed significant source and significant permit modification which is listed below. This comment is followed by IDEM response. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**.

Comment 1:
In lieu of submitting a separate application for an administrative permit amendment to correct a typographical error that was made in the significant permit modification (165-22481-00009), issued on March 4, 2008, Eli Lilly and Company, Clinton Laboratories Facility requests IDEM correct this typographical error in the currently pending permit modification.

When the significant permit modification (165-22481-00009) was issued on March 4, 2008, the reference D.1.10 in Condition D.1.15(a) was inadvertently changed D.1.11. Prior to the significant permit modification (165-22481-00009), Condition D.1.15(a) was written as follows:

(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.

The information specified in Condition D.1.10 refers to coal consumption and characteristics that are required to be reported under 326 IAC 7-2-1. However, when the significant permit modification (165-22481-00009) was issued, the reference D.1.10 was erroneously changed to D.1.11. Condition D.1.15(a) now read as follows:

(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.1.11.

The information specified in Condition D.1.11 refers to fuel oil consumption and characteristics that are not required to be reported under 326 IAC 7-2-1 except upon request. As currently written, Condition D.1.15(a) requires Eli Lilly and Company, Clinton Laboratories Facility to submit records of characteristics and amount of fuel oil used at Eli Lilly and Company, Clinton Laboratories Facility, and nothing regarding coal consumption and characteristics. We do not believe this was an intentional revision to the permit and we request Condition D.1.15(a) be restored as it existed prior to the significant permit modification (165-22481-00009).

Response 1:
Condition D.1.15(a) has been revised as follows in order to correct the typographical error that was made in the significant permit modification (165-22481-00009).

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.1.11D~~**D1.10**.

. . .

Upon further review IDEM, OAQ has made the following changes. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**.

Change 1: On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Therefore, the paragraph (b) of 'County Attainment Status' section of the Technical Support Document (TSD) for the proposed significant source modification (165-25636-00009) and significant permit modification (165-25674-00009) has been revised.

County Attainment Status

. . .

(b) ~~Vermillion County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.~~
Vermillion County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 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 PM2.5 emissions until 326 IAC 2-2 is revised.

. . .

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Eli Lilly and Company, Clinton Laboratories Facility
Source Location:	10500 South State Road 63, Clinton, Indiana 47842
County:	Vermillion
SIC Code:	2833, 2834, 2879
Operating Permit No.:	T165-6462-00009
Operating Permit Issuance Date:	October 1, 2004
Significant Source Modification No.:	165-25636-00009
Significant Permit Modification No.:	165-25674-00009
Permit Reviewer:	Mehul Sura

Existing Approvals

The source was issued Part 70 Operating Permit No.T165-6462-00009 on October 1, 2004. The source has since received the following approval:

(a) First Significant Permit Modification No. 165-22481-00009, issued on March 4, 2008.

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.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) Volatile organic compounds (VOC) and nitrogen oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx 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 NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) Vermillion County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.

(c) Vermillion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Since this source is classified as a chemical process plant, it is considered to be in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

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

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 (tons/year)
PM	Greater than 100
PM10	Greater than 100
SO_2	Greater than 100
VOC	Greater than 100
CO	Greater than 100
NO_x	Greater than 100

(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 the potential to emit calculations for the source as provided in Part 70 Permit No. 165-6462-00009, issued October 1, 2004.

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

HAPs	Potential To Emit (tons/year)
Single HAP	Greater than 10
Combination of HAPs	Greater than 25

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, 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).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Eli Lilly and Company, Clinton Laboratories Facility (herein referred to as a Clinton Laboratories) on December 12, 2007 relating to installation of equipment for the new 'Narasin blending and bagging operation' (Narasin is one of the animal health products manufactured at Clinton Laboratories). Additional information was received on April 30, 2008.

The description of the equipment for the proposed Narasin blending and bagging operation is as shown in the following table. The Carbon Adsorber CA190 is an existing VOC control device operated under the Part 70 Operating Permit and used for controlling the VOC emissions from the existing emission units in the Narasin finishing process.

Equipment	Equipment Description	Control Device Used for the Equipment	Vent for the Equipment
VS601	Transfer Baghouse	Carbon Adsorber CA190	PVC58AC190
VS602	Transfer Baghouse		
VS603	Transfer Baghouse		
BS612	Bag Slitter	Carbon Adsorber CA190 and Dust Collector	
FD603	Feeder	Carbon Adsorber CA190 and Baghouse VS609	
FD605	Feeder		
TK610	Tank		
Waste Drum	Waste Drum		
TK612	Tank		
BAG612	Bagger		
FD604	Feeder	Baghouse VS609	
FD606	Feeder		
BL601A	Blending Silo	Vent Sock	PVC47CBL601A
BL601B	Blending Silo	Vent Sock	PVC47CBL601B
BL602A	Blending Silo	Vent Sock	PVC47CBL602A
BL602B	Blending Silo	Vent Sock	PVC47CBL602B
VS604	Transfer Baghouse	-	PVC47CC604
BS606	Bag Slitter	Dust Collector	PVC47CBS606

Additionally, one (1) particulate filter, which has already been installed at a location before the Carbon Adsorber CA190, will be used for controlling the particulate emissions from the proposed equipment which is vented to the Carbon Adsorber CA190. Since this particulate filter is installed on a voluntary basis, it is not accounted for in the emission calculations for the proposed equipment and will not be subject to permitting requirements.

The existing Narasin blending and bagging equipment that is currently operated under Part 70 Operating Permit will remain in the Permit. This equipment may ultimately be removed but for now the source wants the option to operate these units on a periodic basis.

"Integral Part of the Process" Determination

The Permittee has submitted the following information to justify why the Transfer Baghouses VS601 through VS604, each vent sock mounted on Blending Silos BL601A, BL601B, BL602A, and BL602B, and dust collectors associated with Bag Slitters BS606 and BS612 should be considered integral parts of the proposed Narasin blending and bagging operation:

(a) The Transfer Baghouse VS601 through VS604 are the combination of the fabric filter and fan that pulls the dry material from one location to another location in the process. Without the transfer baghouse, the material could not be captured and loaded into the silos or tanks for holding and further processing.

(b) Each Vent Sock mounted on Blending Silos BL601A, BL601B, BL602A, and BL602B, located at the top of the blending silos, allows air to displace inside the blending silos when these silos are filled with dry material. Due to the dryness and density of the dry material filling the silos, and the turbulent air flow which results when filling the silos, significant quantities of the dry material would escape from the silos if the silos are not equipped with the vent socks. The vent socks capture the dry material and prevent the material from pouring out of the silos. Additionally, the vent socks operate as a passive version of a transfer baghouse. The Permittee has provided IDEM the economic analysis in order to demonstrate that there are economic benefits if the Blending Silos BL601A,

BL601B, BL602A, and BL602B are operated with vent socks. IDEM has determined that there is an overwhelming economic benefit for installing the vent sock on each Blending Silos BL601A, BL601B, BL602A, and BL602B.

(c) Bag Slitters BS606 and BS612 are located inside the building. The dust collectors associated with this equipment serve the dual purpose of containing the valuable raw materials and products inside the equipment as well as preventing the release of nuisance dust into the work place atmosphere.

IDEM, OAQ has evaluated the information submitted and agrees that the Transfer Baghouse VS601 through VS604, each Vent Sock mounted on Blending Silos BL601A, BL601B, BL602A, and BL602B, and the dust collectors on Bag Slitters BS606 and BS612 should be considered an integral part of the proposed Narasin blending and bagging processes. Therefore, the permitting level will be determined using the potential to emit after the baghouses, vent socks, and dust collectors.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

IDEM has reviewed the PTE calculations submitted by the source and determined them to be complete for the purpose of the proposed modification approval. See Appendix A of this document for detailed emission calculations.

Permit Level Determination – Part 70

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

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. The source has bottleneck at the upstream of the proposed Narasin blending and bagging operations. Therefore, this table reflects the bottleneck PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	136.39
PM10	136.39
SO_2	0
VOC	88.59
CO	0
NO_x	0

HAPs	Potential To Emit (tons/year)
Single HAP	0
TOTAL HAPs	0

Pursuant to 326 IAC 2-7-10.5(f)(4), this modification is subject to the requirements of a significant source modification because the potential to emit of PM, PM10 and VOC are greater than twenty-five (25) tons per year, each. Additionally, the modification will be incorporated into the Part 70

Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d)(1), because this modification does not qualify as an administrative amendment or minor permit modification as it involves incorporating into the Part 70 Operating Permit new emission limit for PM for the proposed emission units.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment (except Carbon Adsorber CA190 which is federally enforceable control equipment under the Part 70 Operating Permit No.T165-6462-00009, issued on October 1, 2004) is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (tons/year)		
	PM10	**PM**	**VOC**
VS601 (Transfer Cycle)	0.009	0.009	1.09
VS602 (Transfer Cycle)	0.009	0.009	1.09
VS602 (Mix Cycle)	0.009	0.009	1.09
VS603	0.009	0.009	1.09
BS612	0.001	0.001	0.06
BL601A (Transfer Cycle)	0.04	0.04	0.007
BL601B (Transfer Cycle)	0.04	0.04	0.007
BL602A (Transfer Cycle)	0.04	0.04	0.007
BL602A (Mix Cycle)	0.04	0.04	0.007
BL602B (Transfer Cycle)	0.04	0.04	0.007
BL602B (Mix Cycle)	0.04	0.04	0.007
FD603	0.009	0.009	0.0007
FD605	0.001	0.001	0.00003
TK610	0.04	0.04	0.0004
Waste Drum	negligible	negligible	negligible
TK612	0.04	0.04	0.0005
BAG612	0.02	0.02	0.0005
VS604	0.03	0.03	--
BS606	0.003	0.003	--
FD604	0.03	0.03	--
FD606	0.003	0.003	--
Total for Modification	0.46	0.46	4.47
Significant Level or Major Source Threshold	15	25	40

The Permittee has stated in the application for this approval that there exists a bottleneck upstream of the proposed Narasin blending and bagging operation and there are no emission units downstream of the proposed Narasin blending and bagging operation, and therefore, there will be no increase in emission at affected facilities due to the proposed Narasin blending and bagging operation. Based on this information, this modification at a major stationary source will not be major for Prevention of Significant Deterioration under 326 IAC 2-2-1.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to the proposed modification:

(a) There are no new New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) included due to the proposed modification.

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

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

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

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

CAM Applicability for PM and PM10
The following table is used to identify the applicability of each of the criteria for PM and PM10, under 40 CFR 64.1, to each new or modified emission unit involved:

Emission Unit ID	Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
FD603	PM/PM10	Y	Y	8.56	0.009	100	N	N
FD605	PM/PM10	Y	Y	1.07	0.001	100	N	N
TK610	PM/PM10	Y	Y	36.82	0.04	100	N	N
Waste Drum	PM/PM10	Y	Y	negligible	negligible	100	N	N
TK612	PM/PM10	Y	Y	38.53	0.04	100	N	N
BAG612	PM/PM10	Y	Y	19.26	0.02	100	N	N
FD604	PM/PM10	Y	Y	29.26	0.03	100	N	N
FD606	PM/PM10	Y	Y	2.57	0.003	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification for PM and PM10.

CAM Applicability for VOC
The following table is used to identify the applicability of each of the criteria for VOC, under 40 CFR 64.1, to each new emission unit involved:

Emission Unit ID	Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
VS601	VOC	Y	Y	21.85	1.09	100	N	N
VS602	VOC	Y	Y	43.70	2.18	100	N	N
VS603	VOC	Y	Y	21.85	1.09	100	N	N
BS612	VOC	Y	Y	1.12	0.06	100	N	N
FD603	VOC	Y	Y	0.01	0.0007	100	N	N
FD605	VOC	Y	Y	0.0006	0.00003	100	N	N
TK610	VOC	Y	Y	0.009	0.0004	100	N	N
Waste Drum	VOC	Y	Y	negligible	negligible	100	N	N
TK612	VOC	Y	Y	0.009	0.0005	100	N	N
BAG612	VOC	Y	Y	0.009	0.0005	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification for VOC.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)
The total uncontrolled emissions of PM and PM10 from the proposed emission units are more than 25 and 15 tons/year, respectively. The Permittee shall comply with the following condition:

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 'Description of Proposed Modification' section of this TSD, and will render 326 IAC 2-2 not applicable to the modification permitted under SSM 165-25636-00009.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
(a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) emissions from the processes in the following listed emission units shall not exceed pounds per hour as indicated in the following table. The pound per hour limitation was calculated with the following equation:

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

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

Emission Unit ID	Process Weight Rate (tons per hour)	Emission Limit (pounds per hour)
FD603	7.85	16.31
FD605	0.79	3.51
TK610	13.56	23.52
TK612	17.29	27.68
BAG612	8.65	17.40
FD604	2.51	7.59
FD606	2.32	7.21

(b) The uncontrolled potential to emit (PTE) from VS601 through VS604, BL601A, BL601B, BL602A, BL602B, BS612, Waste Drum, and BS606, each, are less than five hundred fifty-one thousandths (0.551) pound per hour. Therefore, 326 IAC 6-3 is not applicable to these emission units.

326 IAC 8-1-6 (New facilities; general reduction requirements)
The requirements of 326 IAC 8-1-6 apply to a facility that meets the following criteria:

(a) is constructed after 1979

(b) has potential emissions of twenty-five (25) tons or more per year;

(c) is located anywhere in the state; and

(d) is not otherwise regulated by:

(A) other provisions of article 8;

(B) 326 IAC 20-48; or

(C) 326 IAC 20-56.

Except for Transfer Baghouse VS602, the general reduction requirements of VOC are not applicable to any of the proposed emission units because uncontrolled potential VOC emissions from each proposed emission unit is less than 25 tons/year. The BACT (as required by the 326 IAC 8-1-6) for the transfer baghouse, identified as VS602, has been identified in Appendix B of this TSD.

Pursuant to 326 IAC 8-1-6, the Permittee shall:

(a) Reduce the VOC emissions from the transfer baghouse, identified as VS602, by ninety-five percent (95%), using the best available control technology (BACT), identified as Carbon adsorber CA190, or

(b) Reduce the VOC emissions from the transfer baghouse, identified as VS602, using the best available control technology (BACT), identified as Carbon adsorber CA190, such that the outlet VOC concentration from the Carbon adsorber CA190 is always equal to or less than 10 parts per million (ppm).

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 PM, PM10 and VOC emissions from each proposed emission unit are very low, therefore, no new compliance monitoring and testing conditions are included due to the proposed modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T165-6462-00009. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1: The proposed equipment has been added to Section D.4.

SECTION D.4 AHM – PRODUCT FINISHING OPERATIONS

Facility Description [326 IAC 2-7-5(15)]

The information describing the processes contained in these facility description boxes is descriptive information and does not constitute enforceable conditions.

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

Bldg.	Unit ID*	Unit Description	Stack/Vent ID	Control**	Capacity	Units
. . .	. . .	. . .	. . .	. . .	. . .	. . .
C47C	**VS601**	**TRANSFER BAGHOUSE (Transfer Cycle)**	**PVC58AC190**	**Carbon Adsorber CA190****	**37**	**kg/min**
C47C	**VS602**	**TRANSFER BAGHOUSE (Transfer Cycle)**	**PVC58AC190**	**Carbon Adsorber CA190****	**159**	**kg/min**
		TRANSFER BAGHOUSE (Mix Cycle)			**159**	
C47C	**VS603**	**TRANSFER BAGHOUSE**	**PVC58AC190**	**Carbon Adsorber CA190****	**159**	**kg/min**
C47C	**BS612**	**BAG SLITTER**	**PVC58AC190**	**Carbon Adsorber CA190****	**159**	**kg/min**
C47C	**FD603**	**FEEDER**	**PVC58AC190**	**Baghouse VS609**, Carbon Adsorber CA190****	**119**	**kg/min**
C47C	**FD605**	**FEEDER**	**PVC58AC190**	**Baghouse VS609**, Carbon Adsorber CA190****	**12**	**kg/min**
C47C	**TK610**	**TANK**	**PVC58AC190**	**Baghouse VS609**, Carbon Adsorber CA190****	**205.5**	**kg/min**
C47C	**TK612**	**TANK**	**PVC58AC190**	**Baghouse VS609**, Carbon Adsorber CA190****	**262**	**kg/min**
C47C	**BAG612**	**BAGGER**	**PVC58AC190**	**Baghouse VS609**, Carbon Adsorber CA190****	**131**	**kg/min**
C47C	**FD604**	**FEEDER**	**PVC58AC190**	**Baghouse VS609****	**38**	**kg/min**
C47C	**FD606***	**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.

(d) The following emissions units are not subject to applicable requirements, and are listed only for

informational purposes.						
. . .	. . .	. . .	. . .	. . .	. . .	. . .
C47C	**BL601A***	**BLENDING SILO (Transfer Cycle)**	**PVC47CBL601A**		**37**	**kg/min**
C47C	**BL601B***	**BLENDING SILO (Transfer Cycle)**	**PVC47CBL601B**		**37**	**kg/min**
C47C	**BL602A***	**BLENDING SILO (Transfer Cycle)**	**PVC47CBL602A**		**159**	**kg/min**
		BLENDING SILO (Mix Cycle)			**159**	
C47C	**BL602B***	**BLENDING SILO (Transfer Cycle)**	**PVC47CBL602B**		**159**	**kg/min**
		BLENDING SILO (Mix Cycle)			**159**	
C47C	**VS604***	**TRANSFER BAGHOUSE**	**PVC47CC604**		**50**	**kg/min**
C47C	**BS606**	**BAG SLITTER**	**PVC47CBS606**		**47**	**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.

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)
. . .	. . .	. . .	. . .	. . .
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**

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]**

. . .

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 this modification.

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.

Change 2: 40 CFR 60, Subpart Kb was revised on October 15, 2003. However, 326 IAC 12 was not revised to include this revision. Therefore, emission unit TK132 is subject to revised 40 CFR, Subpart Kb only. Conditions D.4.4, D.4.8(d) and D.4.10 have been deleted to reflect this change.

D.4.4 ~~NSPS Subpart Kb [326 IAC 12]~~**Reserved**

~~Pursuant to 326 IAC 12, TK132 is subject to the applicable requirements of the NSPS Subpart Kb, as published July 1, 2000. However, pursuant to 40 CFR 60.110b(b), this tank is exempt from the General Provisions (40 CFR Part 60, Subpart A) and from the provisions of this subpart, with exception of the record keeping requirements of 40 CFR 60.116b(a) and (b). The record keeping requirements of 40 CFR 60.116b(a) and (b) are specified in Condition D.4.8. This requirement is not federally enforceable, and it expires when the October 15, 2003 amendments to Subpart Kb are incorporated into 326 IAC 12.~~

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)]

. . .

D.4.6 Continuous Emissions Monitoring [326 IAC 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)]

D.4.8 Record Keeping Requirements

. . .

(d) **Reserved**~~The Permittee shall maintain records of the capacity and dimensions of TK132. The records shall be readily accessible and shall be kept for the life of the vessel. This requirement is not federally enforceable, and it expires when the October 15, 2003 amendments to 40 CFR Part 60, Subpart Kb are incorporated into 326 IAC 12.~~

. . .

D.4.9 Reporting Requirements

. . .

D.4.10 ~~Notification Requirements [326 IAC 12]~~ **Reserved**

~~(a) The Permittee shall notify IDEM, OAQ within 30 days when the maximum true vapor pressure of the liquid in TK132 exceeds 27.6 kPa.~~

~~(b) The notification shall be submitted to the address listed in Section C, Condition C.19 - General Reporting Requirements, of this permit. The notification is not required to be certified by the responsible official.~~

~~(c) This condition is not federally enforceable, and it expires when the October 15, 2003 amendments to 40 CFR Part 60, Subpart Kb are incorporated into 326 IAC 12.~~

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

D.4.11 Modifications and Construction: Advance Approval of Permit Conditions

. . .

TSD Appendices

The following are the appendices of this TSD:

(1) Appendix A – Emissions Calculations

(2) Appendix B – VOC BACT analyses (pursuant to 326 IAC 8-1-6) for the transfer baghouse, identified as VS602

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 165-25636-00009 and Significant Permit Modification 165-25674-00109. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modifications be approved.

TSD Appendix A

Significant Source Modification No.165-25636-00009

Significant Permit Modification No.165-25674-00009

Table of Contents

Description	Pages
Methodology for the Calculations	1
List of Equipment for New Narasin Blending and Bagging Operation	4
Equipment Capacities	1
Equipment Specifications	1
VOC Emissions	1
Fugitive VOC Emissions	1
PM and PM10 Emissions	1
Emissions Summary	1
Total Pages	11

Methodology for the Calculations

Following Methodology has been used throughout the calculations.
1. The only sources of particulate emissions in new Narasin blending and bagging operation are the baghouses, vent socks, hoppers, and tanks which are vented to atmosphere or carbon adsorbers. These emissions are considered stack particulate emissions. All other equipment are sealed sufficiently or under vacuum to prevent particulates from entering the air. Therefore, no fugitive particulate emissions exist from any new Narasin blending and bagging equipment. If a hopper is always under negative pressure, the vent will not discharge any emissions.
2. Equipment that is enclosed and sealed may have fugitive VOC emissions depending on the internal pressure. Fugitive emissions are zero for equipment under negative or atmospheric pressure.
3. Emission rates are expressed in lb/hr and are all based on instantaneous rates and do not consider any equipment downtime for maintenance, management decisions, resource availability, etc. Throughput calculations are expressed in tons/year and do include equipment downtime due to bottlenecks in the process.
4. No VOC emissions will be given off from the Ingredient 2, Ingredient 3, Ingredient 4, and Ingredient 5 raw material delivery systems.
5. No particulate matter emissions or VOC will be given off from the Ingredient 5 delivery system.
6. Amyl concentrations were based on measurements taken in 2000 when the narasin carbon adsorbers were installed. The concentration of amyl in narasin transferred from granulation to bagging was 159.1 ppm.
7. Bulk material particulates are generally not smaller than 10 microns. The following efficiencies apply to all particulate filters:
Baghouse Filters: Total Particulates = 99.9 % Efficient
Tank/Hopper Filters: Total Particulates = 99.9 % Efficient
Carbon Adsorber Filters: Total Particulates = 99.9 % Efficient
8. The carbon adsorbers have a demonstrated average efficiency of 98% at removing VOCs. The actual emissions will utilize this 98% efficiency while the potential emission calculations will use the 95% efficiency required by the Title V permit.
9. The only VOC in Product Finishing is amyl alcohol.
10. All rates are theoritical, not measured.
11. All emission rates are based on normal operating conditions. Equipment failures are not considered normal operations and any emissions as a result of an equipment failure will be treated as a spill and will not be figured as a planned emission.
12. Due to the lack of published data on calculating fugitive VOC emissions, these calculations do not distinguish between fugitive VOCs at different processing rates and pressures.
13. Equipment located indoors will not have particulate emissions. Any particulates that escape from the equipment will fall to the floor and be collected by operators.
14. The concentration of amyl fumes in a pneumatic conveying stream is directly proportional to the amount of product that is transferred through the line.
15. A tank that is vented to atmosphere will not have enough pressure to have fugitive VOC emissions. However, all vents are considered as stacks and will have VOC emissions if the product contains VOCs.
16. The concentration of amyl alcohol within a tank of product will be similar to the concentration of amyl alcohol within the product stream being delivered from granulation to the new mixing facility (i.e. 159.1 ppm).
17. All equipment handling VOC are eventually routed through baghouses, tanks, or hoppers. Stack VOC emissions will be associated with these pieces of equipment and not the connected pieces of equipment unless the equipment is used as a control device.
18. Equipment handling particulates that are routed to a baghouse are not considered a stack emitter unless the baghouse is a control device.
19. If equipment is not shown on the list of emitters, it is because this piece of equipment is considered as an integral part of an emission source. (i.e. a sample valve connected to a mixer is considered part of the mixer and not a separate piece of equipment).
20. A control device is not considered an emitting device and therefore, it has no emissions.
21. Particulates smaller than 100 mesh will become airborne when agitated and will challenge equipment filters.
22. Emitting equipment that is vented to VS609 will have slide gates in the dust collection line to minimize airflow across the equipment and ensure most of the airborne particles settle in the equipment before being captured by the dust collection system and sent to the baghouse.
23. The Neck Stretcher NS612 and Heat Sealer HS612 are trivial sources of particulate matter and VOC stack emissions. The finished product is already in the bags when it passes through these equipment and generates very small quantities of particulate matter and VOC emissions which are ducted to Baghouse VS609 and then to the Carbon Adsorber CA190 through the particulate filter.

List of Equipment for New Narasin Blending and Bagging Operation

Emitting Equipment	Equipment Description	Equipment Location (Indoor/Outdoor)	Control Device "C" or Emitting Device "E"	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	If No, Applicable Methodology No.
Transfer to VS601	Transfer Line	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
Transfer to VS601	Transfer Line	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
Transfer to VS601	Transfer Line	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
VS601 (Transfer Cycle)	Transfer Baghouse VS601	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	Y	
VS601 (Transfer Cycle)	Transfer Baghouse VS601	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	
VS601 (Transfer Cycle)	Transfer Baghouse VS601	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
ROV601	Rotary Valve ROV601	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
ROV601	Rotary Valve ROV601	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
ROV601	Rotary Valve ROV601	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
BL601A (Transfer Cycle)	Blending Silo BL601A	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	B	Y	
BL601A (Transfer Cycle)	Blending Silo BL601A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y	
BL601A (Transfer Cycle)	Blending Silo BL601A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	B	N	2, 15
BL601B (Transfer Cycle)	Blending Silo BL601B	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	B	Y	
BL601B (Transfer Cycle)	Blending Silo BL601B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y	
BL601B (Transfer Cycle)	Blending Silo BL601B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	B	N	2, 15
ROV601A	Rotary Valve ROV601A	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
ROV601A	Rotary Valve ROV601A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
ROV601A	Rotary Valve ROV601A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
ROV601B	Rotary Valve ROV601B	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
ROV601B	Rotary Valve ROV601B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
ROV601B	Rotary Valve ROV601B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
Transfer to VS602	Transfer Line	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
Transfer to VS602	Transfer Line	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
Transfer to VS602	Transfer Line	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
VS602 (Transfer Cycle)	Transfer Baghouse VS602	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	Y	
VS602 (Transfer Cycle)	Transfer Baghouse VS602	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	
VS602 (Transfer Cycle)	Transfer Baghouse VS602	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
VS602 (Mix Cycle)	Transfer Baghouse VS602	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	Y	
VS602 (Mix Cycle)	Transfer Baghouse VS602	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	
VS602 (Mix Cycle)	Transfer Baghouse VS602	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
ROV602	Rotary Valve ROV602	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
ROV602	Rotary Valve ROV602	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
ROV602	Rotary Valve ROV602	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
BL602A (Transfer Cycle)	Blending Silo BL602A	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	B	Y	
BL602A (Transfer Cycle)	Blending Silo BL602A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y	
BL602A (Transfer Cycle)	Blending Silo BL602A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	B	N	2, 15
BL602B (Transfer Cycle)	Blending Silo BL602B	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	B	Y	
BL602B (Transfer Cycle)	Blending Silo BL602B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y	
BL602B (Transfer Cycle)	Blending Silo BL602B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	B	N	2, 15
BL602A (Mix Cycle)	Blending Silo BL602A	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	B	Y	
BL602A (Mix Cycle)	Blending Silo BL602A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y	

Emitting Equipment	Equipment Description	Equipment Location (Indoor/Outdoor)	Control Device "C" or Emitting Device "E"	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	If No, Applicable Methodology No.
BL602A (Mix Cycle)	Blending Silo BL602A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	B	N	2, 15
BL602B (Mix Cycle)	Blending Silo BL602B	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	B	Y	
BL602B (Mix Cycle)	Blending Silo BL602B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y	
BL602B (Mix Cycle)	Blending Silo BL602B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	B	N	2, 15
ROV602A	Rotary Valve ROV602A	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
ROV602A	Rotary Valve ROV602A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
ROV602A	Rotary Valve ROV602A	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
ROV602B	Rotary Valve ROV602B	Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
ROV602B	Rotary Valve ROV602B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
ROV602B	Rotary Valve ROV602B	Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
Transfer to VS603	Transfer Line	Indoor/Outdoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	N	1
Transfer to VS603	Transfer Line	Indoor/Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	N	17
Transfer to VS603	Transfer Line	Indoor/Outdoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
VS603	Transfer Baghouse VS603	Indoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	Y	
VS603	Transfer Baghouse VS603	Indoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	
VS603	Transfer Baghouse VS603	Indoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
Transfer to VS604	Transfer Line	Indoor/Outdoor	E	Ingredient 2	Particulates	V	N	1
Transfer to VS604	Transfer Line	Indoor/Outdoor	E	Ingredient 2	VOC - Stack	V	N	4
Transfer to VS604	Transfer Line	Indoor/Outdoor	E	Ingredient 2	VOC - Fugitive	V	N	2, 4
VS604	Transfer Baghouse VS604	Indoor	E	Ingredient 2	Particulates	V	Y	
VS604	Transfer Baghouse VS604	Indoor	E	Ingredient 2	VOC - Stack	V	N	4
VS604	Transfer Baghouse VS604	Indoor	E	Ingredient 2	VOC - Fugitive	V	N	2, 4
COE605	Refeed Conveyor COE605	Indoor	E	Ingredient 6/Amyl Alcohol	Particulates	V	N	1
COE605	Refeed Conveyor COE605	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Stack	V	N	17
COE605	Refeed Conveyor COE605	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Fugitive	V	N	2
BS612	Bag Slitter BS612	Indoor	E	Ingredient 6/Amyl Alcohol	Particulates	V	Y	
BS612	Bag Slitter BS612	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Stack	V	Y	
BS612	Bag Slitter BS612	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Fugitive	V	N	2
COE612	Conveyor COE612	Indoor	E	Ingredient 6/Amyl Alcohol	Particulates	V	N	1
COE612	Conveyor COE612	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Stack	V	N	17
COE612	Conveyor COE612	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Fugitive	V	N	2
TK606	Tank TK606	Indoor	E	Ingredient 3	Particulates	V	N	13
TK606	Tank TK606	Indoor	E	Ingredient 3	VOC - Stack	V	N	4
TK606	Tank TK606	Indoor	E	Ingredient 3	VOC - Fugitive	V	N	2, 4
COE606	Conveyor COE606	Indoor	E	Ingredient 3	Particulates	V	N	1
COE606	Conveyor COE606	Indoor	E	Ingredient 3	VOC - Stack	V	N	4
COE606	Conveyor COE606	Indoor	E	Ingredient 3	VOC - Fugitive	V	N	2, 4
BS606	Bag Slitter BS606	Indoor	E	Ingredient 3	Particulates	V	Y	
BS606	Bag Slitter BS606	Indoor	E	Ingredient 3	VOC - Stack	V	N	4
BS606	Bag Slitter BS606	Indoor	E	Ingredient 3	VOC - Fugitive	V	N	2, 4
COE607	Conveyor COE607	Indoor	E	Ingredient 4	Particulates	V	N	1
COE607	Conveyor COE607	Indoor	E	Ingredient 4	VOC - Stack	V	N	4

Emitting Equipment	Equipment Description	Equipment Location (Indoor/Outdoor)	Control Device "C" or Emitting Device "E"	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	If No, Applicable Methodology No.
COE607	Conveyor COE607	Indoor	E	Ingredient 4	VOC - Fugitive	V	N	2, 4
DS607	Dump Station DS607	Indoor	E	Ingredient 4	Particulates	A	N	13
DS607	Dump Station DS607	Indoor	E	Ingredient 4	VOC - Stack	A	N	4
DS607	Dump Station DS607	Indoor	E	Ingredient 4	VOC - Fugitive	A	N	2, 4
Transfer line to VS609	Transfer Line	Indoor	C	Ingredients 1-4, 6/Amyl Alcohol	Particulates	V	N	20
Transfer line to VS609	Transfer Line	Indoor	C	Ingredients 1-4, 6/Amyl Alcohol	VOC - Stack	V	N	20
Transfer line to VS609	Transfer Line	Indoor	C	Ingredients 1-4, 6/Amyl Alcohol	VOC - Fugitive	V	N	20
VS609	Control Baghouse VS609	Indoor	C	Ingredients 1-4, 6/Amyl Alcohol	Particulates	V	N	20
VS609	Control Baghouse VS609	Indoor	C	Ingredients 1-4, 6/Amyl Alcohol	VOC - Stack	V	N	20
VS609	Control Baghouse VS609	Indoor	C	Ingredients 1-4, 6/Amyl Alcohol	VOC - Fugitive	V	N	20
FD603	Feeder FD603	Indoor	E	Ingredient 1/Amyl Alcohol	Particulates	V	Y	
FD603	Feeder FD603	Indoor	E	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	
FD603	Feeder FD603	Indoor	E	Ingredient 1/Amyl Alcohol	VOC - Fugitive	V	N	2
FD604	Feeder FD604	Indoor	E	Ingredient 2	Particulates	V	Y	
FD604	Feeder FD604	Indoor	E	Ingredient 2	VOC - Stack	V	N	4
FD604	Feeder FD604	Indoor	E	Ingredient 2	VOC - Fugitive	V	N	2, 4
FD605	Feeder FD605	Indoor	E	Ingredient 6/Amyl Alcohol	Particulates	V	Y	
FD605	Feeder FD605	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Stack	V	Y	
FD605	Feeder FD605	Indoor	E	Ingredient 6/Amyl Alcohol	VOC - Fugitive	V	N	2
FD606	Feeder FD606	Indoor	E	Ingredient 3	Particulates	V	Y	
FD606	Feeder FD606	Indoor	E	Ingredient 3	VOC - Stack	V	N	4
FD606	Feeder FD606	Indoor	E	Ingredient 3	VOC - Fugitive	V	N	2, 4
FD607	Feeder FD607	Indoor	E	Ingredient 4	Particulates	B	N	13
FD607	Feeder FD607	Indoor	E	Ingredient 4	VOC - Stack	B	N	4
FD607	Feeder FD607	Indoor	E	Ingredient 4	VOC - Fugitive	B	N	4
TK610	Tank TK610	Indoor	E	Ingredient 1-4, 6/Amyl Alcohol	Particulates	V	Y	
TK610	Tank TK610	Indoor	E	Ingredient 1-4, 6/Amyl Alcohol	VOC - Stack	V	Y	
TK610	Tank TK610	Indoor	E	Ingredient 1-4, 6/Amyl Alcohol	VOC - Fugitive	V	N	2
ROV610	Rotary Valve ROV610	Indoor	E	Ingredient 1-4, 6/Amyl Alcohol	Particulates	V	N	1
ROV610	Rotary Valve ROV610	Indoor	E	Ingredient 1-4, 6/Amyl Alcohol	VOC - Stack	V	N	4
ROV610	Rotary Valve ROV610	Indoor	E	Ingredient 1-4, 6/Amyl Alcohol	VOC - Fugitive	V	N	2, 4
TK608	Tank TK608	Indoor	E	Ingredient 5	Particulates	A	N	5
TK608	Tank TK608	Indoor	E	Ingredient 5	VOC - Stack	A	N	5
TK608	Tank TK608	Indoor	E	Ingredient 5	VOC - Fugitive	A	N	2, 5
P608	Pump P608	Indoor	E	Ingredient 5	Particulates	P	N	5
P608	Pump P608	Indoor	E	Ingredient 5	VOC - Stack	P	N	5
P608	Pump P608	Indoor	E	Ingredient 5	VOC - Fugitive	P	N	2, 5
MX610	Mixer MX610	Indoor	E	Ingredients 1-6/Amyl Alcohol	Particulates	V	N	1
MX610	Mixer MX610	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	N	17
MX610	Mixer MX610	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Fugitive	V	N	2
SCR611	Screener SCR611	Indoor	E	Ingredients 1-6/Amyl Alcohol	Particulates	V	N	1
SCR611	Screener SCR611	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	N	17

Emitting Equipment	Equipment Description	Equipment Location (Indoor/Outdoor)	Control Device "C" or Emitting Device "E"	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	If No, Applicable Methodology No.
SCR611	Screener SCR611	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Fugitive	V	N	2
Waste Drum	Waste Drum for Screener SCR611	Indoor	E	Ingredients 1-6/Amyl Alcohol	Particulates	V	Y	
Waste Drum	Waste Drum for Screener SCR611	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	Y	
Waste Drum	Waste Drum for Screener SCR611	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Fugitive	V	N	2
TK612	Tank TK612	Indoor	E	Ingredients 1-6/Amyl Alcohol	Particulates	V	Y	
TK612	Tank TK612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	Y	
TK612	Tank TK612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Fugitive	V	N	2
BAG612	Bagger BAG612	Indoor	E	Ingredients 1-6/Amyl Alcohol	Particulates	V	Y	
BAG612	Bagger BAG612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	Y	
BAG612	Bagger BAG612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Fugitive	V	N	2
NS612	Neck Stretcher NS612	Indoor	E	Ingredients 1-6/Amyl Alcohol	Particulates	V	N	23
NS612	Neck Stretcher NS612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	N	23
NS612	Neck Stretcher NS612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Fugitive	V	N	2
HS612	Heat Sealer HS612	Indoor	E	Ingredients 1-6/Amyl Alcohol	Particulates	V	N	23
HS612	Heat Sealer HS612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	N	23
HS612	Heat Sealer HS612	Indoor	E	Ingredients 1-6/Amyl Alcohol	VOC - Fugitive	V	N	2

Equipment Capacities

Equipment	Maximum Potential Rate for Individual Equipment (kg/min)	Maximum Percent of Time for Which Various Operations Can Take Place in an Equipment	Maximum Hours of Operation (hours)	Bottlenecked Potential Rate for Individual Equipment (kg/min)	Bottlenecked Percent of Time for Which Various Operations Can Take Place in an Equipment	Bottlenecked Hours of Operation for Individual Equipment (hours)	Bottlenecked Hours of Operation for Combined Equipment (Process) (hours)	Actual Expected Rate for Individual Equipment (kg/min)	Projected % of Time that Individual Equipment will Run	Actual Expected Hours of Operation (hours)
Transfer to VS601	42	100	8760	37	100	8760	8760	34	70	6132
VS601 (Transfer Cycle)	42	100	8760	37	100	8760	8760	34	70	6132
ROV601	42	100	8760	37	100	8760	8760	34	70	6132
BL601A (Transfer Cycle)	42	79	6930	37	81	7106	4380	34	35	3066
BL601B (Transfer Cycle)	42	79	6930	37	81	7106	4380	34	35	3066
ROV601A	159	21	1830	159	19	1654	1019	159	7	656
ROV601B	159	21	1830	159	19	1654	1019	159	7	656
Transfer to VS602	159	67	5840	159	47	4077	4077	159	30	2622
VS602 (Transfer Cycle)	159	33	2920	159	23	2038	2038	159	15	1311
VS602 (Mix Cycle)	159	33	2920	159	23	2038	2038	159	15	1311
ROV602	159	67	5840	159	47	4077	4077	159	30	2622
BL602A (Transfer Cycle)	159	33	2920	159	23	2038	1019	159	7	656
BL602B (Transfer Cycle)	159	33	2920	159	23	2038	1019	159	7	656
BL602A (Mix Cycle)	159	33	2920	159	23	2038	1019	159	7	656
BL602B (Mix Cycle)	159	33	2920	159	23	2038	1019	159	7	656
ROV602A	159	67	5840	159	47	4077	2038	159	15	1311
ROV602B	159	67	5840	159	47	4077	2038	159	15	1311
Transfer to VS603	159	100	8760	159	23	2038	2038	159	15	1311
VS603	159	100	8760	159	23	2038	2038	159	15	1311
Transfer to VS604	50	100	8760	50	27	2334	2334	50	15	1276
VS604	50	100	8760	50	27	2334	2334	50	15	1276
COE605	131	100	8760	131	1	124	124	120	1	87
BS612	131	100	8760	131	1	124	124	120	1	87
COE612	131	100	8760	131	1	124	124	120	1	87
TK606	47	100	8760	47	24	2069	2069	47	2	200
COE606	47	100	8760	47	24	2069	2069	47	2	200
BS606	131	100	8760	47	24	2069	2069	47	2	200
COE607	10.4	100	8760	10.4	4	343	343	10.4	0	14
DS607	10.4	100	8760	10.4	4	343	343	10.4	0	14
Transfer line to VS609	331	100	8760	0.6	51	4456	4456	0.4	29	2574
VS609	331	100	8760	0.6	51	4456	4456	0.4	29	2574
FD603	119	100	8760	119	31	2724	2724	110	22	1895
FD604	38	100	8760	38	35	3071	3071	35	21	1823
FD605	12	100	8760	12	15	1351	1351	11	11	948
FD606	35.2	100	8760	35.2	32	2762	2762	32	3	293
FD607	1.3	100	8760	1.3	31	2743	2743	1.1	2	133
TK610	205.5	100	8760	205.5	31	2714	2714	189.1	18	1545
ROV610	131	100	8760	131	49	4258	4258	120	28	2435
TK608	2.3	100	8760	3.6	31	2701	2701	3.3	22	1895
P608	2.3	100	8760	3.6	31	2701	2701	3.3	22	1895
MX610	131	100	8760	131	49	4332	4332	120	28	2487
SCR611	262	100	8760	262	25	2228	2228	120	29	2574
TK612	262	100	8760	262	25	2228	2228	120	29	2574
BAG612	131	100	8760	131	51	4456	4456	120	29	2574
NS612	131	100	8760	131	51	4456	4456	120	29	2574
HS612	131	100	8760	131	51	4456	4456	120	29	2574

Design and Operating Specifications for Narasin Continuous Blending Equipment

Emission Unit ID	Emission Unit Description	Material Throughput Rate (kg/min)			Hours of Operation			Exhaust Flow Rate (cfm)			VOC Concentration in Exhaust (ppm)			% of Material Smaller than 100 Mesh (%)	Settling Factor for Dust in Emissions Unit (%)	Density of Product Being Handled in Emissions Unit (lb/cf)	Efficiency of Pollution Control Device							
																	VOC				$PM / PM_{10} / PM_{2.5}$			
																		Required				Required		
		Maximum Potential	Bottlenecked Potential	Projected Actual	Maximum Potential	Bottlenecked Potential	Projected Actual	Maximum Potential	Bottlenecked Potential	Projected Actual	Maximum Potential	Bottlenecked Potential	Projected Actual				Integral	Permitted (Carbon Adsorber CA190)	Actual (Carbon Adsorber CA190)	Not Required	Integral	Permitted (Baghouse VS609)	Actual (Baghouse VS609)	Not Required
VS601	Transfer Baghouse VS601 (Transfer Cycle)	42	37	34	8760	8760	6132	1000	1000	1000	412	363	334	2	98	--	--	95	98	--	99.9	--	--	99.9
VS602	Transfer Baghouse VS602 (Transfer Cycle)	159	159	159	2920	2038	1311	1000	1000	1000	1561	1561	1561	2	98	--	--	95	98	--	99.9	--	--	99.9
	Transfer Baghouse VS602 (Mix Cycle)	159	159	159	2920	2038	1311	1000	1000	1000	1561	1561	1561	2	98	--	--	95	98	--	99.9	--	--	99.9
VS603	Transfer Baghouse VS603	159	159	159	8760	2038	1311	1000	1000	1000	1561	1561	1561	2	98	--	--	95	98	--	99.9	--	--	99.9
BS612	Bag Slitter BS612	131	131	120	8760	124	87	400	400	400	3297	3297	3020	5	98	--	--	95	98	--	99.9	--	--	99.9
BL601A	Blending Silo BL601A (Transfer Cycle)	42	37	34	6930	4380	3066	1.777	1.565	1.438	159	159	159	2	98	52	--	--	--	--	99	--	--	--
BL601B	Blending Silo BL601B (Transfer Cycle)	42	37	34	6930	4380	3066	1.777	1.565	1.438	159	159	159	2	98	52	--	--	--	--	99	--	--	--
BL602A	Blending Silo BL602A (Transfer Cycle)	159	159	159	2920	1019	656	6.727	6.727	6.727	159	159	159	2	98	52	--	--	--	--	99	--	--	--
	Blending Silo BL602A (Mix Cycle)	159	159	159	2920	1019	656	6.727	6.727	6.727	159	159	159	2	98	52	--	--	--	--	99	--	--	--
BL602B	Blending Silo BL602B (Transfer Cycle)	159	159	159	2920	1019	656	6.727	6.727	6.727	159	159	159	2	98	52	--	--	--	--	99	--	--	--
	Blending Silo BL602B (Mix Cycle)	159	159	159	2920	1019	656	6.727	6.727	6.727	159	159	159	2	98	52	--	--	--	--	99	--	--	--
FD603	Feeder FD603	119	119	110	8760	2724	1895	5.035	5.035	4.654	159	159	159	2	98	52	--	95	98	--	--	99.9	99.9	99.9
FD605	Feeder FD605	12	12	11	8760	1351	948	0.508	0.508	0.465	122	122	122	5	98	52	--	95	98	--	--	99.9	99.9	99.9
TK610	Tank TK610	205.5	205.5	189.1	8760	2714	1545	8.694	8.694	8.000	54	54	54	5	98	52	--	95	98	--	--	99.9	99.9	99.9
TK612	Tank TK612	262	262	120	8760	2228	2574	11.085	11.085	5.077	54	54	54	5	98	52	--	95	98	--	--	99.9	99.9	99.9
BAG612	Bagger BAG612	131	131	120	8760	4456	2574	5.542	5.542	5.077	54	54	54	5	99	52	--	95	98	--	--	99.9	99.9	99.9
VS604	Transfer Baghouse VS604	50	50	50	8760	2334	1276	--	--	--	--	--	--	19	98	--	--	--	--	--	99.9	--	--	--
BS606	Bag Slitter BS606	131	47	47	8760	2069	200	400	400	400	--	--	--	2	98	--	--	--	--	--	99.9	--	--	--
FD604	Feeder FD604	38	38	35	8760	3071	1823	--	--	--	--	--	--	19	98	--	--	--	--	--	--	99.9	99.9	99.9
FD606	Feeder FD606	35.2	35.2	32	8760	2762	293	--	--	--	--	--	--	2	98	--	--	--	--	--	--	99.9	99.9	99.9

Stack VOC Emissions

Table A

					System Characteristics Measured for Pre-Continuous Blending Project (Used to Calculate an Emission Factor)				Processing Rate Capacities for Calculation of VOC Stack Emissions (kg/min)			Pneumatic Conveying System Air Flow Rate (cfm)			Calculated Stack VOC Calculations for C47 Area (Values are in ppm)			Stack VOC Calculations for C47 Area (Values are in lb/hr and do not include reductions from carbon adsorber)			Stack VOC Calculations for C47 Area (Values are in lb/hr and do include reductions from carbon adsorber)			Total Stack VOC from Baghouses/Tanks - Upstream of Carbon Adsorbers (Values are in tons/year)				Total Stack VOC from Baghouses/Tanks after Control Devices (Values are in tons/year)			
Emitting Equipment	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	Year 2000 Typical Material Processing Rate for Equipment (kg/min)	Year 2000 Measured Amyl Concentration (ppm)	Year 2000 Measured Airflow (cfm)	Emission Factor (ppm*cf/kg)	Maximum Process Rate (kg/min)	Bottlenecked Process Rate (kg/min)	Projected Actual Process Rate (kg/min)	Maximum Airflow Rate (cfm)	Bottlenecked Airflow Rate (cfm)	Projected Actual Airflow Rate (cfm)	Maximum Potential Concentration (ppm)	Bottlenecked Potential Concentration (ppm)	Projected Actual Concentration (ppm)	Maximum Uncontrolled Potential Emissions (lb/hr)	Bottlenecked Uncontrolled Potential Emissions (lb/hr)	Projected Uncontrolled Actual Emissions (lb/hr)	Maximum Controlled Potential Emissions (lb/hr)	Bottlenecked Controlled Potential Emissions (lb/hr)	Projected Controlled Actual Emissions (lb/hr)	Maximum Uncontrolled Potential Emissions (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Uncontrolled Actual Emissions (tons/year)	Maximum Controlled Potential Emissions (tons/year)	Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Controlled Actual Emissions (tons/year)
VS601 (Transfer Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	21.00	159	1297	9820	42	37	34	1000	1000	1000	412	363	334	5.66	4.99	4.58	0.28	0.25	0.09	24.80	21.85	21.85	14.05	1.24	1.09	1.09	0.28
VS602 (Transfer Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	21.00	159	1297	9820	159	159	159	1000	1000	1000	1561	1561	1561	21.43	21.43	21.43	1.07	1.07	0.43	31.29	21.85	21.85	14.05	1.56	1.09	1.09	0.28
VS602 (Mix Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	21.00	159	1297	9820	159	159	159	1000	1000	1000	1561	1561	1561	21.43	21.43	21.43	1.07	1.07	0.43	31.29	21.85	21.85	14.05	1.56	1.09	1.09	0.28
VS603	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	21.00	159	1297	9820	159	159	159	1000	1000	1000	1561	1561	1561	21.43	21.43	21.43	1.07	1.07	0.43	93.88	21.85	21.85	14.05	4.69	1.09	1.09	0.28
BS612	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y	21.00	54	3915	10067	131	131	120	400	400	400	3297	3297	3020	18.10	18.10	16.58	0.91	0.91	0.33	79.29	1.12	1.12	0.72	3.96	0.06	0.06	0.01
Sub Total																		**88.06**	**87.39**	**85.47**	**4.40**	**4.37**	**1.71**	**260.55**	**88.50**	**88.50**	**56.93**	**13.03**	**4.43**	**4.43**	**1.14**

Table B

Emitting Equipment	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)		Anticipated Concentration of Amyl (ppm)	Product Density (lb/cf)		Maximum Potential (kg/min)	Bottlenecked Potential (kg/min)	Proposed Actual (kg/min)	Maximum Potential Rate that Vapors are Expelled from the Vessel (cfm)	Bottlenecked Potential Rate that Vapors are Expelled from the Vessel (cfm)	Projected Actual Rate that Vapors are Expelled from the Vessel (cfm)	Maximum Potential Concentration (ppm)	Bottlenecked Potential Concentration (ppm)	Projected Actual Concentration (ppm)	Maximum Uncontrolled Potential Emissions (lb/hr)	Bottlenecked Uncontrolled Potential Emissions (lb/hr)	Projected Uncontrolled Actual Emissions (lb/hr)	Maximum Controlled Potential Emissions (lb/hr)	Bottlenecked Controlled Potential Emissions (lb/hr)	Projected Controlled Actual Emissions (lb/hr)	Maximum Uncontrolled Potential Emissions (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Uncontrolled Actual Emissions (tons/year)	Maximum Controlled Potential Emissions (tons/year)	Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Controlled Actual Emissions (tons/year)
BL601A (Transfer Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y		159	52		42	37	34	1.777	1.565	1.438	159	159	159	0.004	0.003	0.003	0.004	0.003	0.003	0.01	0.01	0.007	0.005	0.01	0.01	0.007	0.005
BL601B (Transfer Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y		159	52		42	37	34	1.777	1.565	1.438	159	159	159	0.004	0.003	0.003	0.004	0.003	0.003	0.01	0.01	0.007	0.005	0.01	0.01	0.007	0.005
BL602A (Transfer Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y		159	52		159	159	159	6.727	6.727	6.727	159	159	159	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.007	0.005	0.02	0.01	0.007	0.005
BL602B (Transfer Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y		159	52		159	159	159	6.727	6.727	6.727	159	159	159	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.007	0.005	0.02	0.01	0.007	0.005
BL602A (Mix Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y		159	52		159	159	159	6.727	6.727	6.727	159	159	159	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.007	0.005	0.02	0.01	0.007	0.005
BL602B (Mix Cycle)	Ingredient 1/Amyl Alcohol	VOC - Stack	B	Y		159	52		159	159	159	6.727	6.727	6.727	159	159	159	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.007	0.005	0.02	0.01	0.007	0.005
FD603	Ingredient 1/Amyl Alcohol	VOC - Stack	V	Y		159	52		119	119	110	5.035	5.035	4.654	159	159	159	0.01	0.01	0.01	0.0005	0.0005	0.0002	0.05	0.01	0.01	0.01	0.002	0.0007	0.0007	0.0002
FD605	Nanain/Amyl Alcohol	VOC - Stack	V	Y		122	52		12	12	11	0.508	0.508	0.465	122	122	122	0.0009	0.0009	0.0008	0.00004	0.00004	0.00002	0.004	0.0006	0.0006	0.0004	0.0002	0.00003	0.00003	0.000007
TK610	Ingredients 1-4, 6/Amyl Alcohol	VOC - Stack	V	Y		54	52		206	206	189	8.694	8.694	8.000	54	54	54	0.006	0.006	0.006	0.0003	0.0003	0.0001	0.03	0.009	0.009	0.005	0.001	0.0004	0.0004	0.00009
TK612	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	Y		54	52		262	262	120	11.085	11.085	5.077	54	54	54	0.008	0.008	0.004	0.0004	0.0004	0.00008	0.04	0.009	0.009	0.005	0.002	0.0005	0.0005	0.0001
BAG612	Ingredients 1-6/Amyl Alcohol	VOC - Stack	V	Y		54	52		131	131	120	5.542	5.542	5.077	54	54	54	0.004	0.004	0.004	0.0002	0.0002	0.00008	0.02	0.009	0.009	0.005	0.0009	0.0005	0.0005	0.0001
Sub Total																		**0.10**	**0.10**	**0.09**	**0.068**	**0.067**	**0.065**	**0.25**	**0.13**	**0.09**	**0.05**	**0.12**	**0.09**	**0.05**	**0.03**
Grand Total																		**88.16**	**87.49**	**85.56**	**4.47**	**4.44**	**1.77**	**260.80**	**88.63**	**88.59**	**56.98**	**13.15**	**4.51**	**4.47**	**1.17**

Methodology Used in Table A

Permitted Carbon Adsorber (CA190) Efficiency for VOC control = 95% and Actual Carbon Adsorber (CA190) Effciency for VOC control = 98%

Emission Units listed in Table A are vented to Carbon Adsorber (CA190).

Emission Factor (ppm*cf/kg) = Year 2000 Measured Amyl Concentration (ppm) * Year 2000 Measured Airflow (cfm) / Year 2000 Typical Material Processing Rate for Equipment (kg/min)

Maximum Potential Concentration (ppm) = Emission Factor (ppm*cf/kg) * Maximum Process Rate (kg/min) / Maximum Airflow Rate (cfm)

Bottlenecked Potential Concentration (ppm) = Emission Factor (ppm*cf/kg) * Bottlenecked Process Rate (kg/min) / Bottlenecked Airflow Rate (cfm)

Projected Actual Concentration (ppm) = Emission Factor (ppm*cf/kg) * Projected Actual Process Rate (kg/min) / Projected Actual Airflow Rate (cfm)

Maximum Uncontrolled Potential Emissions (lb/hr) = Maximum Potential Concentration (ppm) * (10^-6) * Maximum Airflow Rate (cfm) * 60 (minute/hr) * 88.15 (lb/lb-mole of Amyl) / 385.3 (cf/lb-mole)

Bottlenecked Uncontrolled Potential Emissions (lb/hr) = Bottlenecked Potential Concentration (ppm) * (10^-6) * Bottlenecked Airflow Rate (cfm) * 60 (minute/hr) * 88.15 (lb/lb-mole of Amyl) / 385.3 (cf/lb-mole)

Projected Uncontrolled Actual Emissions (lb/hr) = Projected Actual Concentration (ppm) * (10^-6) * Projected Actual Airflow Rate (cfm) * 60 (minute/hr) * 88.15 (lb/lb-mole of Amyl) / 385.3 (cf/lb-mole)

Maximum Controlled Potential Emissions (lb/hr) = Maximum Uncontrolled Potential Emissions (lb/hr) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)]

Bottlenecked Controlled Potential Emissions (lb/hr) =Bottlenecked Uncontrolled Potential Emissions (lb/hr) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)]

Projected Controlled Actual Emissions (lb/hr) = Projected Uncontrolled Actual Emissions (lb/hr) * [1-(Actual Carbon Adsorber's efficiency in % / 100)]

Maximum Uncontrolled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (lb/hr) * Maximum Hours of Operation (hrs/yr) / 2000 (lb/ton)

Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) =Bottlenecked Uncontrolled Potential Emissions (lb/hr) * Bottlenecked Hours of Operation for Individual Equipment (hrs/yr) / 2000 (lb/ton)

Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) * Bottlenecked Hours of Operation for Combined Equipment (Process) (hours) / 2000 (lb/ton)

Projected Uncontrolled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (lb/hr) * Actual Expected Hours of Operation (hrs/yr) / 2000 (lb/ton)

Maximum Controlled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (tons/year) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)]

Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)]

Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)]

Projected Controlled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (tons/year) * [1-(Actual Carbon Adsorber's efficiency in % / 100)]

Methodology Used in Table B

Permitted Carbon Adsorber (CA190) Efficiency for VOC control = 95% and Actual Carbon Adsorber (CA190) Effciency for VOC control = 98%

Maximum Potential Rate that Vapors are Expelled from the Vessel (cfm) = Maximum Potential (kg/min) * 2.2 (lb/kg) / Product Density (lb/cf)

Bottlenecked Potential Rate that Vapors are Expelled from the Vessel (cfm) = Bottlenecked Potential (kg/min) * 2.2 (lb/kg) / Product Density (lb/cf)

Projected Actual Rate that Vapors are Expelled from the Vessel (cfm) = Proposed Actual (kg/min) * 2.2 (lb/kg) / Product Density (lb/cf)

Maximum Uncontrolled Potential Emissions (lb/hr) = Maximum Potential Concentration (ppm) * (10^-6) * Maximum Potential Rate that Vapors are Expelled from the Vessel (cfm) * 60 (minute/hr) * 88.15 (lb/lb-mole of Amyl) / 385.3 (cf/lb mole)

Bottlenecked Uncontrolled Potential Emissions (lb/hr) = Bottlenecked Potential Concentration (ppm) * (10^-6) * Bottlenecked Potential Rate that Vapors are Expelled from the Vessel (cfm) * 60 (minute/hr) * 88.15 (lb/lb-mole of Amyl) / 385.3 (cf/lb-mole)

Projected Uncontrolled Actual Emissions (lb/hr) = Projected Actual Concentration (ppm) * (10^-6) * Projected Actual Rate that Vapors are Expelled from the Vessel (cfm) * 60 (minute/hr) * 88.15 (lb/lb-mole of Amyl) / 385.3 (cf/lb-mole)

Maximum Controlled Potential Emissions (lb/hr) = Maximum Uncontrolled Potential Emissions (lb/hr) (for BL601A, BL601B, BL602A, and BL602B)

Maximum Controlled Potential Emissions (lb/hr) = Maximum Uncontrolled Potential Emissions (lb/hr) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)] (for other equipment in Table B besides BL601A, BL601B, BL602A, and BL602B)

Bottlenecked Controlled Potential Emissions (lb/hr) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) (for BL601A, BL601B, BL602A, and BL602B)

Bottlenecked Controlled Potential Emissions (lb/hr) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)] (for other equipment in Table B besides BL601A, BL601B, BL602A, and BL602B)

Projected Controlled Actual Emissions (lb/hr) = Projected Uncontrolled Actual Emissions (lb/hr) (for BL601A, BL601B, BL602A, and BL602B)

Projected Controlled Actual Emissions (lb/hr) = Projected Uncontrolled Actual Emissions (lb/hr) * [1-(Actual Carbon Adsorber's efficiency in % / 100)] (for other equipment in Table B besides BL601A, BL601B, BL602A, and BL602B)

Maximum Uncontrolled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (lb/hr) * Maximum Hours of Operation (hours) / 2000 (lb/hr)

Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) * Bottlenecked Hours of Operation for Individual Equipment (hours) / 2000 (lb/hr)

Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) * Bottlenecked Hours of Operation for Combined Equipment (Process) (hours) / 2000 (lb/hr)

Projected Uncontrolled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (lb/hr) * Actual Expected Hours of Operation (hours) / 2000 (lb/hr)

Maximum Controlled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (tons/year) (for BL601A, BL601B, BL602A, and BL602B)

Maximum Controlled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (tons/year) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)] (for other equipment in Table B besides BL601A, BL601B, BL602A, and BL602B)

Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) (for BL601A, BL601B, BL602A, and BL602B)

Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)] (for other equipment in Table B besides BL601A, BL601B, BL602A, and BL602B)

Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) (for BL601A, BL601B, BL602A, and BL602B)

Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) * [1-(Permitted Carbon Adsorber's efficiency in % / 100)] (for other equipment in Tab besides BL601A, BL601B, BL602A, and BL602B)

Projected Controlled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (tons/year) (for BL601A, BL601B, BL602A, and BL602B)

Projected Controlled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (tons/year) * [1-(Actual Carbon Adsorber's efficiency in % / 100)] (for other equipment in Table B besides BL601A, BL601B, BL602A, and BL602B)

Fugitive VOC Calculations for Narasin Continuous Blending Project

Emitting Equipment	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	Emission Factor (kg/hr/source)	Number of Flanges, Connections, and Appurtenances	Typical Amyl Concentration (ppm) = Weight Fraction of Amyl in Air Vapor	Fugitive Amyl Vapors (lb/hr)	Fugitive Amyl Vapors (tons/year)
There are no pieces of equipment with fugitive VOC emissions.									
Totals								**0**	**0**

Stack PM/PM10/PM2.5 Emissions

Baghouses					Material Transfer Rates for Pneumatic Conveying Systems (kg/min)							PM/PM10/PM2.5 Emissions - Uncontrolled (lb/hr)			PM/PM10/PM2.5 Emissions - Controlled (lb/hr)			PM/PM10/PM2.5 Emissions - Uncontrolled (tons/year)				PM/PM10/PM2.5 Emissions - Controlled (tons/year)			
Emitting Equipment	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	Maximum Potential (kg/min)	Bottlenecked Potential (kg/min)	Projected Actual (kg/min)	Primary Filter Efficiency (%) *	Secondary Filter Efficiency (%)***	% of Sample Smaller than 100 Mesh	Dust In Vessel Settling Factor %	Maximum Uncontrolled Potential Emissions (lb/hr)	Bottlenecked Uncontrolled Potential Emissions (lb/hr)	Projected Uncontrolled Actual Emissions (lb/hr)	Maximum Controlled Potential Emissions (lb/hr)	Bottlenecked Controlled Potential Emissions (lb/hr)	Projected Controlled Actual Emissions (lb/hr)	Maximum Uncontrolled Potential Emissions (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Uncontrolled Actual Emissions (tons/year)	Maximum Controlled Potential Emissions (tons/year)	Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Controlled Actual Emissions (tons/year)
VS601 (Transfer Cycle)	Ingredient 1/Amyl Alcohol	Particulates	V	Y	42	37	34	99.9	99.9	2	98	0.002	0.002	0.002	0.002	0.002	0.000002	0.01	0.009	0.009	0.006	0.01	0.009	0.009	0.000006
VS602 (Transfer Cycle)	Ingredient 1/Amyl Alcohol	Particulates	V	Y	159	159	159	99.9	99.9	2	98	0.008	0.008	0.008	0.008	0.008	0.000008	0.01	0.009	0.009	0.006	0.01	0.009	0.009	0.000006
VS602 (Mix Cycle)	Ingredient 1/Amyl Alcohol	Particulates	V	Y	159	159	159	99.9	99.9	2	98	0.008	0.008	0.008	0.008	0.008	0.000008	0.01	0.009	0.009	0.006	0.01	0.009	0.009	0.000006
VS603	Ingredient 1/Amyl Alcohol	Particulates	V	Y	159	159	159	99.9	99.9	2	98	0.008	0.008	0.008	0.008	0.008	0.000008	0.04	0.009	0.009	0.006	0.04	0.009	0.009	0.000006
VS604	Ingredient 2	Particulates	V	Y	50	50	50	99.9	0.0	19	98	0.03	0.03	0.03	0.03	0.03	0.03	0.11	0.03	0.03	0.02	0.11	0.03	0.03	0.02
Sub Total												**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.03**	**0.18**	**0.06**	**0.06**	**0.04**	**0.18**	**0.06**	**0.06**	**0.02**

Tanks					Fill/Empty Rates for Bulk Solids Tanks (kg/min)							PM/PM10/PM2.5 Emissions - Uncontrolled (lb/hr)			PM/PM10/PM2.5 Emissions - Controlled (lb/hr)			PM/PM10/PM2.5 Emissions - Uncontrolled (tons/year)				PM/PM10/PM2.5 Emissions - Controlled (tons/year)			
Emitting Equipment	Emitted Material	Emission Type	Internal Pressure (P=Positive, V=Vacuum, B=Both, A=Atmospheric)	Does Equipment Emit? (Y/N)	Maximum Potential (kg/min)	Bottlenecked Potential (kg/min)	Projected Actual (kg/min)	Primary Filter Efficiency (%) **	Secondary Filter Efficiency (%) ***	% of Sample Smaller than 100 Mesh	Dust In Vessel Settling Factor %	Maximum Uncontrolled Potential Emissions (lb/hr)	Bottlenecked Uncontrolled Potential Emissions (lb/hr)	Projected Uncontrolled Actual Emissions (lb/hr)	Maximum Controlled Potential Emissions (lb/hr)	Bottlenecked Controlled Potential Emissions (lb/hr)	Projected Controlled Actual Emissions (lb/hr)	Maximum Uncontrolled Potential Emissions (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Uncontrolled Actual Emissions (tons/year)	Maximum Controlled Potential Emissions (tons/year)	Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year)	Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year)	Projected Controlled Actual Emissions (tons/year)
BL601A (Transfer Cycle)	Ingredient 1/Amyl Alcohol	Particulates	B	Y	42	37	34	99	0	2	98	0.02	0.02	0.02	0.02	0.02	0.02	0.08	0.07	0.04	0.03	0.08	0.07	0.04	0.03
BL601B (Transfer Cycle)	Ingredient 1/Amyl Alcohol	Particulates	B	Y	42	37	34	99	0	2	98	0.02	0.02	0.02	0.02	0.02	0.02	0.08	0.07	0.04	0.03	0.08	0.07	0.04	0.03
BL602A (Transfer Cycle)	Ingredient 1/Amyl Alcohol	Particulates	B	Y	159	159	159	99	0	2	98	0.08	0.08	0.08	0.08	0.08	0.08	0.12	0.09	0.04	0.03	0.12	0.09	0.04	0.03
BL602B (Transfer Cycle)	Ingredient 1/Amyl Alcohol	Particulates	B	Y	159	159	159	99	0	2	98	0.08	0.08	0.08	0.08	0.08	0.08	0.12	0.09	0.04	0.03	0.12	0.09	0.04	0.03
BL602A (Mix Cycle)	Ingredient 1/Amyl Alcohol	Particulates	B	Y	159	159	159	99	0	2	98	0.08	0.08	0.08	0.08	0.08	0.08	0.12	0.09	0.04	0.03	0.12	0.09	0.04	0.03
BL602B (Mix Cycle)	Ingredient 1/Amyl Alcohol	Particulates	B	Y	159	159	159	99	0	2	98	0.08	0.08	0.08	0.08	0.08	0.08	0.12	0.09	0.04	0.03	0.12	0.09	0.04	0.03
BS612	Ingredient 6/Amyl Alcohol	Particulates	V	Y	131	131	120	99.9	99.9	5	98	0.02	0.02	0.02	0.02	0.02	0.00002	0.08	0.001	0.001	0.0007	0.08	0.001	0.001	0.0000007
BS606	Ingredient 3	Particulates	V	Y	131	47	47	99.9	0	2	98	0.007	0.002	0.002	0.007	0.002	0.002	0.03	0.003	0.003	0.0002	0.03	0.003	0.003	0.0002
FD603	Ingredient 1/Amyl Alcohol	Particulates	V	Y	119	119	110	99.9	99.9	2	98	6.28	6.28	5.81	0.006	0.006	0.000006	27.52	8.56	8.56	5.50	0.03	0.009	0.009	0.000006
FD604	Ingredient 2	Particulates	V	Y	38	38	35	99.9	99.9	19	98	19.06	19.06	17.56	0.02	0.02	0.00002	83.49	29.26	29.26	16.00	0.08	0.03	0.03	0.00002
FD605	Ingredient 6/Amyl Alcohol	Particulates	V	Y	12	12	11	99.9	99.9	5	98	1.58	1.58	1.45	0.0016	0.0016	0.0000015	6.94	1.07	1.07	0.69	0.007	0.0011	0.0011	0.0000007
FD606	Ingredient 3	Particulates	V	Y	35.2	35.2	32	99.9	99.9	2	98	1.86	1.86	1.69	0.002	0.002	0.000002	8.14	2.57	2.57	0.25	0.008	0.003	0.003	0.0000002
TK610	Ingredients 1-4, 6/Amyl Alcohol	Particulates	V	Y	205.5	205.5	189.1	99.9	99.9	5	98	27.13	27.13	24.96	0.03	0.03	0.00002	118.81	36.82	36.82	19.29	0.12	0.04	0.04	0.00002
TK612	Ingredients 1-6/Amyl Alcohol	Particulates	V	Y	262	262	120	99.9	99.9	5	98	34.58	34.58	15.84	0.03	0.03	0.00002	151.48	38.53	38.53	20.39	0.15	0.04	0.04	0.00002
BAG612	Ingredients 1-6/Amyl Alcohol	Particulates	V	Y	131	131	120	99.9	99.9	5	99	8.65	8.65	7.92	0.009	0.009	0.000008	37.87	19.26	19.26	10.19	0.04	0.02	0.02	0.00001
Sub Total												**99.55**	**99.54**	**75.62**	**0.50**	**0.49**	**0.37**	**434.99**	**136.55**	**136.32**	**72.48**	**1.18**	**0.62**	**0.40**	**0.17**
Grand Total												**99.60**	**99.59**	**75.67**	**0.56**	**0.55**	**0.40**	**435.18**	**136.61**	**136.39**	**72.51**	**1.37**	**0.68**	**0.46**	**0.18**

Methodolgy

* For a given equipment, the Primary Filter Efficiency is the Particulate capture efficiency of the equipment itself before the Particulate is emitted into the atmosphere from the equipment.

** For BL601A, BL601B, BL602A, and BL602B, the Primary Filter Efficiency is the particulate capture efficiency of the vent socks that are considered integral. For BS612 and BS606, the Primary Filter Efficiency is the particulate capture efficiency of the dust collectors that are considered integral. For all other equipment, Primary Filter Efficiency is the Particulate capture efficiency of the Baghouse VS609.

*** Secondary Filter Efficiency is the Particulate capture efficiency of Particulate Filter which is installed after the Baghouse VS609 and before the Carbon Adsorber CA190. This Particulate Filter is installed on voluntary purpose, and therefore, it does not have any enforceable permit condition.

Maximum Uncontrolled Potential Emissions (lb/hr) = Maximum Potential (kg/min) * 2.2(lb/kg) * 60 (min/hr) * (% of Sample Smaller than 100 Mesh / 100) * [1-(Primary Filter Efficiency (%) / 100] * [1-(Dust In Vessel Settling Factor % / 100] (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Maximum Uncontrolled Potential Emissions (lb/hr) = Maximum Potential (kg/min) * 2.2(lb/kg) * 60 (min/hr) * (% of Sample Smaller than 100 Mesh / 100) * [1-(Dust In Vessel Settling Factor % / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Bottlenecked Uncontrolled Potential Emissions (lb/hr) = Bottlenecked Potential (kg/min) * 2.2(lb/kg) * 60 (min/hr) * (% of Sample Smaller than 100 Mesh / 100) * [1-(Primary Filter Efficiency (%) / 100] * [1-(Dust In Vessel Settling Factor % / 100] (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Bottlenecked Uncontrolled Potential Emissions (lb/hr) = Bottlenecked Potential (kg/min) * 2.2(lb/kg) * 60 (min/hr) * (% of Sample Smaller than 100 Mesh / 100) * [1-(Dust In Vessel Settling Factor % / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Projected Uncontrolled Actual Emissions (lb/hr) = Projected Actual (kg/min) * 2.2(lb/kg) * 60 (min/hr) * (% of Sample Smaller than 100 Mesh / 100) * [1-(Primary Filter Efficiency (%) / 100] * [1-(Dust In Vessel Settling Factor % / 100] (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Projected Uncontrolled Actual Emissions (lb/hr) = Projected Actual (kg/min) * 2.2(lb/kg) * 60 (min/hr) * (% of Sample Smaller than 100 Mesh / 100) * [1-(Dust In Vessel Settling Factor % / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Maximum Controlled Potential Emissions (lb/hr) = Maximum Uncontrolled Potential Emissions (lb/hr) (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Maximum Controlled Potential Emissions (lb/hr) = Maximum Uncontrolled Potential Emissions (lb/hr) * [1-(Primary Filter Efficiency (%) / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Bottlenecked Controlled Potential Emissions (lb/hr) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Bottlenecked Controlled Potential Emissions (lb/hr) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) * [1-(Primary Filter Efficiency (%) / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Projected Controlled Actual Emissions (lb/hr) = Projected Uncontrolled Actual Emissions (lb/hr) * [1-(Secondary Filter Efficiency (%) / 100] (for VS601, VS602, VS603, VS604, and BS612)

Projected Controlled Actual Emissions (lb/hr) = Projected Uncontrolled Actual Emissions (lb/hr) (for BL601A, BL601B, BL602A, BL602B, and BS606)

Projected Controlled Actual Emissions (lb/hr) = Projected Uncontrolled Actual Emissions (lb/hr) * [1-(Primary Filter Efficiency (%) / 100] * [1-(Secondary Filter Efficiency (%) / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Maximum Uncontrolled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (lb/hr) * Maximum Hours of Operation (hrs/yr) / 2000 (lb/hr)

Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) * Bottlenecked Hours of Operation for Individual Equipment (hrs/yr) / 2000 (lb/hr)

Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions (lb/hr) * Bottlenecked Hours of Operation for Combined Equipment (Process) (hours) / 2000 (lb/hr)

Projected Uncontrolled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (lb/hr) * Actual Expected Hours of Operation (hours) / 2000 (lb/to

Maximum Controlled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (tons/year) (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Maximum Controlled Potential Emissions (tons/year) = Maximum Uncontrolled Potential Emissions (tons/year) * [1-(Primary Filter Efficiency (%) / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Bottlenecked Controlled Potential Emissions for Individual Equipment (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Individual Equipment (tons/year) * [1-(Primary Filter Efficiency (%) / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) (for VS601, VS602, VS603, VS604, BL601A, BL601B, BL602A, BL602B, BS612, and BS606)

Bottlenecked Controlled Potential Emissions for Combined Equipment (Process) (tons/year) = Bottlenecked Uncontrolled Potential Emissions for Combined Equipment (Process) (tons/year) * [1-(Primary Filter Efficiency (%) / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Projected Controlled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (tons/year) * [1- (Secondary Filter Efficiency (%))/100] (for VS601, VS602, VS603, VS604, and BS612)

Projected Controlled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (tons/year) (for BL601A, BL601B, BL602A, BL602B, and BS606)

Projected Controlled Actual Emissions (tons/year) = Projected Uncontrolled Actual Emissions (tons/year) * [1-(Primary Filter Efficiency (%) / 100] * [1-(Secondary Filter Efficiency (%) / 100] (for FD603, FD604, FD605, FD606, TK610, Waste Drum, TK612, and BAG612)

Maximum Potential, Bottlenecked Potential, and Projected Actual Uncontrolled and Controlled Emissions from Narasin Continuous Blending Equipment

Emission Unit ID	Emission Unit Description	Maximum Potential Emissions								Bottlenecked Potential Emissions								Projected Actual Emissions							
		Uncontrolled				Controlled				Uncontrolled				Controlled				Uncontrolled				Controlled			
		VOC		PM / PM_{10} / $PM_{2.5}$		VOC		PM / PM_{10} / $PM_{2.5}$		VOC		PM / PM_{10} / $PM_{2.5}$		VOC		PM / PM_{10} / $PM_{2.5}$		VOC		PM / PM_{10} / $PM_{2.5}$		VOC		PM / PM_{10} / $PM_{2.5}$	
		lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year	lb/hr	tons/year
VS601	Transfer Baghouse VS601 (Transfer Cycle)	5.66	24.80	0.002	0.01	0.28	1.24	0.002	0.01	4.99	21.85	0.002	0.009	0.25	1.09	0.002	0.009	4.58	14.05	0.002	0.006	0.09	0.28	0.000002	0.000006
VS602	Transfer Baghouse VS602 (Transfer Cycle)	21.43	31.29	0.008	0.01	1.07	1.56	0.008	0.01	21.43	21.85	0.008	0.009	1.07	1.09	0.008	0.009	21.43	14.05	0.008	0.006	0.43	0.28	0.000008	0.000006
	Transfer Baghouse VS602 (Mix Cycle)	21.43	31.29	0.008	0.01	1.07	1.56	0.008	0.01	21.43	21.85	0.008	0.009	1.07	1.09	0.008	0.009	21.43	14.05	0.008	0.006	0.43	0.28	0.000008	0.000006
VS603	Transfer Baghouse VS603	21.43	93.88	0.008	0.04	1.07	4.69	0.008	0.04	21.43	21.85	0.008	0.009	1.07	1.09	0.008	0.009	21.43	14.05	0.008	0.006	0.43	0.28	0.000008	0.000006
BS612	Bag Slitter BS612	18.10	79.29	0.02	0.08	0.91	3.96	0.02	0.08	18.10	1.12	0.02	0.001	0.91	0.06	0.02	0.001	16.58	0.72	0.016	0.0007	0.33	0.01	0.00002	0.0000007
BL601A	Blending Silo BL601A (Transfer Cycle)	0.004	0.01	0.02	0.08	0.004	0.01	0.02	0.08	0.003	0.007	0.02	0.04	0.003	0.007	0.02	0.04	0.003	0.005	0.02	0.03	0.003	0.005	0.02	0.03
BL601B	Blending Silo BL601B (Transfer Cycle)	0.004	0.01	0.02	0.08	0.004	0.01	0.02	0.08	0.003	0.007	0.02	0.04	0.003	0.007	0.02	0.04	0.003	0.005	0.02	0.03	0.003	0.005	0.02	0.03
BL602A	Blending Silo BL602A (Transfer Cycle)	0.01	0.02	0.08	0.12	0.01	0.02	0.08	0.12	0.01	0.007	0.08	0.04	0.01	0.007	0.08	0.04	0.01	0.005	0.08	0.03	0.01	0.005	0.08	0.03
	Blending Silo BL602A (Mix Cycle)	0.01	0.02	0.08	0.12	0.01	0.02	0.08	0.12	0.01	0.007	0.08	0.04	0.01	0.007	0.08	0.04	0.01	0.005	0.08	0.03	0.01	0.005	0.08	0.03
BL602B	Blending Silo BL602B (Transfer Cycle)	0.01	0.02	0.08	0.12	0.01	0.02	0.08	0.12	0.01	0.007	0.08	0.04	0.01	0.007	0.08	0.04	0.01	0.005	0.08	0.03	0.01	0.005	0.08	0.03
	Blending Silo BL602B (Mix Cycle)	0.01	0.02	0.08	0.12	0.01	0.02	0.08	0.12	0.01	0.007	0.08	0.04	0.01	0.007	0.08	0.04	0.01	0.005	0.08	0.03	0.01	0.005	0.08	0.03
FD603	Feeder FD603	0.01	0.05	6.28	27.52	0.0005	0.002	0.006	0.03	0.01	0.01	6.28	8.56	0.0005	0.0007	0.006	0.009	0.01	0.01	5.81	5.50	0.0002	0.0002	0.000006	0.000006
FD605	Feeder FD605	0.0009	0.004	1.58	6.94	0.00004	0.0002	0.002	0.007	0.0009	0.0006	1.58	1.07	0.00004	0.00003	0.002	0.001	0.0008	0.0004	1.45	0.69	0.00002	0.000007	0.000001	0.0000007
TK610	Tank TK610	0.006	0.03	27.13	118.81	0.0003	0.001	0.03	0.12	0.006	0.009	27.13	36.82	0.0003	0.0004	0.03	0.04	0.006	0.005	24.96	19.29	0.0001	0.00009	0.00002	0.00002
Waste Drum	Waste Drum	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible	negligible
TK612	Tank TK612	0.008	0.04	34.58	151.48	0.0004	0.002	0.03	0.15	0.008	0.009	34.58	38.53	0.0004	0.0005	0.03	0.04	0.004	0.005	15.84	20.39	0.00008	0.0001	0.00002	0.00002
BAG612	Bagger BAG612	0.004	0.02	8.65	37.87	0.0002	0.0009	0.009	0.04	0.004	0.009	8.65	19.26	0.0002	0.0005	0.009	0.02	0.004	0.005	7.92	10.19	0.00008	0.0001	0.000008	0.00001
VS604	Transfer Baghouse VS604	--	--	0.03	0.11	--	--	0.03	0.11	--	--	0.03	0.03	--	--	0.03	0.03	--	--	0.03	0.02	--	--	0.03	0.02
BS606	Bag Slitter BS606	--	--	0.007	0.03	--	--	0.007	0.03	--	--	0.002	0.003	--	--	0.002	0.003	--	--	0.002	0.0002	--	--	0.002	0.0002
FD604	Feeder FD604	--	--	19.06	83.49	--	--	0.02	0.08	--	--	19.06	29.26	--	--	0.02	0.03	--	--	17.56	16.00	--	--	0.00002	0.00002
FD606	Feeder FD606	--	--	1.86	8.14	--	--	0.002	0.008	--	--	1.86	2.57	--	--	0.002	0.003	--	--	1.69	0.25	--	--	0.000002	0.0000002
Totals		**88.16**	**260.80**	**99.60**	**435.18**	**4.47**	**13.15**	**0.56**	**1.37**	**87.49**	**88.59**	**99.59**	**136.39**	**4.44**	**4.47**	**0.55**	**0.46**	**85.56**	**56.98**	**75.67**	**72.51**	**1.77**	**1.17**	**0.40**	**0.18**

Notes:

1. Maximum potential, bottlenecked potential, and projected actual uncontrolled emissions take into account the emissions reduction from baghouses, vent socks, and dust collectors that are considered integral to the operation of the emission units.
2. Maximum potential and bottlenecked potential controlled emissions take into account the emissions reduction from baghouses, vent socks, and dust collectors that are considered integral to the operation of the emission units, and the pollution control devices, which are considered "required" for permitting purposes and will have federally enforceable requirements.
3. Actual controlled emissions take into account the emissions reduction from baghouses, vent socks, and dust collectors that are consisdered integral to the operation of the emission units, and the pollution control devices which are considered "required" for permitting purposes and will have federally enforceable requirements, and the pollution control devices which exist but are considered "not required" for permitting purposes.

Indiana Department of Environmental Management
Office of Air Quality

Appendix B – Best Available Control Technology (BACT) Analyses
Significant Source Modification No.: 165-25636-00009
Significant Permit Modification No.: 165-25674-00009

Source Background and Description

Source Name:	Eli Lilly and Company, Clinton Laboratories Facility
Source Location:	10500 South State Road 63, Clinton, Indiana 47842
County:	Vermillion
SIC Code:	2833, 2834, and 2879
Operating Permit No.:	T165-6462-00009
Operating Permit Issuance Date:	October 1, 2004
Significant Source Modification No.:	165-25636-00009
Significant Permit Modification No.:	165-25674-00009
Permit Reviewer:	Mehul Sura

Proposed Expansion

On December 12, 2007, the Office of Air Quality (OAQ) received an application from Eli Lilly and Company, Clinton Laboratories Facility (located at 10500 South State Road 63, Clinton, Indiana) relating to installation of equipment for the new 'Narasin blending and bagging operation'. Additional information was received from the source on April 30, 2008.

Requirement for VOC BACT

The provision of 326 IAC 8-1-6 (New facilities; general reduction requirements) requires a VOC BACT review to be performed on any facility which meets the following criteria:

(a) constructed after 1979;

(b) has potential emissions of twenty-five (25) tons or more per year of VOC;

(c) located anywhere in the state; and

(d) not otherwise regulated by:

(A) other provisions of article 8;

(B) 326 IAC 20-48; or

(C) 326 IAC 20-56.

The transfer baghouse, identified as VS602, one of the proposed equipment for the new 'Narasin blending and bagging operation', meets all of the above criteria (please refer the 'State Rule Applicability' section of the Technical Support Document (TSD) for details). Therefore, the transfer baghouse, identified as VS602, is subject to VOC BACT analysis.

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution, thereby protecting public health and the environment.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories. There is no requirement in the State or Federal regulations to require innovative control to be used as BACT.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

The Office of Air Quality (OAQ) makes BACT determinations by following the five steps identified above.

Summary of Similar Sources (SIC Code 2833 or 2834)

The table below summarizes existing sources with similar operations (SIC Code 2833 or 2834) that are listed in the U.S. EPA RACT/BACT/LAER (RBLC) Clearinghouse database and other resources, such as other permitting agencies websites. (SIC Code 2879 represents the sources which are primarily engaged in manufacturing pesticides and agricultural chemicals products. The proposed 'Narasin blending and bagging operation' does not involve manufacturing of pesticides and agricultural products, therefore the following table does not include the sources with SIC code of 2879.)

Table 1: Sources with SIC Code 2833 or 2834

Company Name, State	Product
Eli Lilly and Company, IN	Narasin
Eli Lilly and Company, IN	Monensin
Wyckoff, Inc., MI	Monensin
Pfizer, Inc., MI	Pharmaceutical Product

Step 1: Identify Potential Control Technologies

There are two categories of controls for VOCs: destruction processes and reclamation processes.

Destruction technologies reduce the VOC concentration by high temperature oxidation into carbon dioxide and water vapor. Reclamation is the capture of VOCs for reuse or disposal. There are also commercially available combinations of reclamation and destruction technologies.

Destruction Control Methods

The destruction of organic compounds usually requires temperatures ranging from 1200°F to 2200°F for direct thermal oxidizers or 600°F to 1200°F for catalytic systems. Combustion temperature depends on the chemical composition and the desired destruction efficiency. Carbon dioxide and water vapor are the typical products of complete combustion. Turbulent mixing and combustion chamber retention times of 0.5 to 1.0 seconds are needed to obtain high destruction efficiencies.

Fume oxidizers typically need supplemental fuel. Concentrated VOC streams with high heat contents obviously require less supplementary fuel than more dilute streams. VOC streams sometimes have a heat content high enough to be self-sustaining, but a supplemental fuel-firing rate equal to about 5% of the total oxidizer heat input is usually needed to stabilize the burner flame. Natural gas is the most common fuel for VOC oxidizers, but fuel oil is an option in some circumstances.

Combustion control technologies include:

(1) Recuperative Thermal Oxidizer,

(2) Regenerative Thermal Oxidizer,

(3) Catalytic Oxidizer, and

(4) Flare.

Reclamation Control Methods
Organic compounds may be reclaimed by one of three possible methods:

(1) Adsorption,

(2) Absorption (scrubbing), or

(3) Refrigerated Condensation.

In general, the organic compounds are separated from the emission stream and reclaimed for reuse or disposal. Depending on the nature of the contaminant and the inlet concentration of the emission stream, recovery technologies can reach efficiencies of 98%.

Adsorption is a surface phenomenon where attraction between the carbon and the VOC molecules binds the pollutants to the carbon surface. Both carbon and VOC are chemically intact after adsorption. The VOCs may be removed, or desorbed, from the carbon and reclaimed or destroyed.

Absorption is a unit operation where components of a gas phase mixture (pollutants) are selectively transferred to a relatively nonvolatile liquid, usually water. Sometimes, organic liquids, such as mineral oil or non volatile hydrocarbons, are suitable absorption solvents. The choice of solvent depends on cost and the solubility of the pollutant in the solvent.

Refrigerated Condensation is the separation of VOCs from an emission stream through a phase change, by either increasing the system pressure or, more commonly, lowering the system temperature below the dew point of the VOC vapor. When condensers are used for air pollution control, they usually operate at the pressure of the emission stream, and typically require a refrigeration unit to obtain the temperature necessary to condense the VOCs from the emission stream.

Combination Control Methods
In some cases, a combination of control technologies offers the most efficient and cost effective VOC control.

The combination of carbon adsorption with recuperative thermal incineration is available from several vendors. This system concentrates the VOC stream by using carbon adsorption to remove low concentration VOCs in an emission stream and then uses a lower volume of hot air, commonly one-tenth the original flow, to desorb the pollutants. A recuperative incinerator for destroying pollutants in the concentrated stream is much smaller and has lower supplemental fuel requirements than an incinerator sized for the full emission stream volume.

Absorption systems can also be used to concentrate emission streams to reduce the size of destruction equipment. The concentration effect is not as extreme as with carbon adsorption, a concentrated exhaust stream one quarter the volume of the inlet stream seems to be the practical limit. Absorption concentrators are typically suited for batch processes or to equalize pollutant concentrations in a variable stream. The physical characteristics that drive the absorption of pollutants into a liquid also limit the opportunity to remove those pollutants from the liquid stream.

Step 2: Eliminate Technically Infeasible Options

The following available and proven control alternatives were evaluated for technical feasibility.

Table 2: VOC BACT Control Technology Analysis

Technology	Technically Feasible?	BACT Evaluation
Regenerative Thermal Oxidizer (RTO)	Yes	A RTO is an add-on control device which converts VOC into CO_2 and H_2O through oxidation of the VOC. RTO uses a direct contact heat exchanger. This direct contact heat exchanger consists of a bed of porous ceramic packing or other structured, high heat capacity media. RTO is technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602.
Absorbers	No	Absorbers control VOC emissions by dissolving one or more soluble components of a gas mixture in a liquid in a wet scrubber, packed tower or bubble tower. Absorbers are not technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602, because low VOC concentration in exhaust gas will result in poor solubility of VOC in absorber media. Since this add-on control device is not technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602, this control option is being eliminated in this step (Step 2) of the BACT analysis.
Recuperative Thermal Oxidizer	Yes	A Recuperative Thermal Oxidizer is an add-on control device to control VOC emissions by introducing VOC laden gas stream into the oxidizer. Before entering the oxidizer, the VOC laden gas stream is pre-heated by exiting flue gas from the same system in a heat exchanger or recuperator. A burner in the oxidizer then heats the VOC laden gas stream to the required temperature of 1200° F, to complete the VOC oxidation process. The gas stream (flue gas) leaving the oxidizer is then passed through the heat exchanger where incoming VOC laden gas is preheated by the heat of the exiting flue gas. Finally, the flue gas is discharged into the atmosphere. Recuperative Thermal Oxidizer is technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602.
Catalytic Oxidizer (Recuperative and Regenerative type)	Yes	A Catalytic Oxidizer is an add-on control device to control VOC emissions by using a bed of catalyst that facilitates the oxidation of combustible gases. The catalyst increases the reaction rate and allows the conversion of VOC at lower temperature than a thermal oxidizer. Catalytic Oxidizer is technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602.
Refrigerated Condenser	No	A Refrigerated Condenser is an add-on control device to control VOC emissions with high VOC concentrations (usually greater than 5,000 ppmv). Refrigerated Condenser is not technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602, because the VOC concentration in exhaust gas is very low. Since this add-on control device is not technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602, this control option is being eliminated in this step (Step 2) of the BACT analysis.

Table 2: VOC BACT Control Technology Analysis		
Technology	**Technically Feasible?**	**BACT Evaluation**
Carbon Adsorbers	Yes	Carbon Adsorbers are add-on control devices to control VOC emissions by adsorption. Carbon Adsorbers are technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602.
Flares	No	Flaring is a volatile combustion control process for VOCs in which the VOCs are piped to a remote, usually elevated, location and burned in an open flame in the open air using a specially designed burner tip, auxiliary fuel, and steam or air to promote mixing for nearly complete (> 98%) VOC destruction. Flare system is not technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602, due to low heat capacity of the exhaust gas. Since this add-on control device is not technically feasible to control the VOC emissions from the transfer baghouse, identified as VS602, this control option is being eliminated in this step (Step 2) of the BACT analysis.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Control Technology	Rank	Control Efficiency	Expected Emission Rate (tons per year)	Emission Reduction (tons per year)	Total Cost Effectiveness*
Recuperative Thermal Oxidizer	1	98%	0.874	42.826	$2,169
Recuperative Catalytic Oxidizer	2	98%	0.874	42.826	$2,224
Regenerative Catalytic Oxidizer	3	98%	0.874	42.826	$2,132
Regenerative Thermal Oxidizer	4	98%	0.874	42.826	$1,833
Carbon Adsorbers	5	95%	2.185	41.515	$333

* The cost effectiveness values for controlling the VOC (amyl alcohol) emissions from the transfer baghouse, identified as VS602, as shown in the above table are derived from the BACT analysis that was performed for the same VOC (amyl alcohol) under significant source modification approval (SSM No. 165-12309-00009), issued for this source on January 16, 2001.

The following table lists the proposed VOC BACT determination along with the existing VOC BACT determinations for the similar operations. All data in the table is based on the information obtained from the permit application submitted by Eli Lilly and Company, Clinton Laboratories Facility, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies.

PROPOSAL		
Company Name	**VOC Control (percentage or numerical limit based on 3-hour block average)**	**Control Method**
Eli Lilly and Company, Clinton Laboratories Facility	95% or 10 parts per million (ppm) outlet VOC concentration from the Carbon Adsorber	Carbon Adsorber* (Carbon Adsorber, identified as CA190)
COMPARABLE BACT DETERMINATIONS		
Company Name	**VOC Control (percentage or numerical limit)**	**Control Method**
Eli Lilly and Company, IN	95%	Carbon Adsorber
Wyckoff, Inc., MI	94%	Condensing-Scrubber and Low- Temperature Condenser
Pfizer, Inc., MI	99.99%	Thermal Oxidizer

* The Carbon Adsorber, as proposed by the source, is the existing Carbon Adsorber, identified as CA190, operated under the Part 70 Operating Permit and used for controlling the VOC emissions from the existing emission units in the Narasin finishing process at the source.

Step 4: Evaluate the Most Effective Controls and Document the Results

Carbon Adsorber

The Carbon Adsorber (existing Carbon Adsorber, identified as CA190) represents the lowest control cost of the options considered to be technically feasible for the transfer baghouse, identified as VS602. In addition, the capital cost will be minimal to add the transfer baghouse, identified as VS602, to the existing Carbon Adsorber, identified as CA190.

The source has several years of operating experience with carbon adsorption systems, as it is already operating carbon adsorption units for other processes (Product Recovery) at the source that are able to achieve similar level of VOC control.

Thermal and Catalytic Oxidizer

Based upon the potential emission estimates:

(a) The controlled potential emissions from the transfer baghouse, identified as VS602, is 2.185 tons per year, if the Carbon Adsorber, identified as CA190, is used as a control device for the transfer baghouse, and

(b) The controlled potential emissions from the transfer baghouse, identified as VS602, is 0.874 tons per year, if the combustion control technology (thermal or catalytic oxidizer) is used as a control device for the transfer baghouse.

The incremental cost of recovering additional control of VOC emissions through the use of the lowest cost combustion control technology (regenerative thermal oxidizer) is $49,303 per ton of VOC. This cost to reduce VOC emissions by an additional 1.31 (2.185 - 0.874 = 1.31) tons per year through the thermal oxidizer is significantly high.

The combustion control technology options which would result in a slightly higher VOC control efficiency would also consume more energy (in the form of natural gas consumption) than carbon adsorption.

Environmental and Energy Impacts
Compared to carbon adsorption, thermal and catalytic oxidizer technologies will result in emissions of nitrogen oxides and other air pollutants due to combustion of exhaust gases as well use of auxiliary fuel. More importantly, carbon adsorption technology enables the source to recover and reuse the VOC (amyl alcohol). The destructive emission control technologies, will not allow the source to recover and reuse the VOC (amyl alcohol). Recovery and reuse of VOC (amyl alcohol) represents a significant cost savings for the source and environmental benefits from reduction in amount of amyl alcohol that must be manufactured, transported, and distributed.

Step 5: Select BACT

Based on the control technology evaluation made in Step 4 above, IDEM has determined that the carbon adsorption technology (Carbon Adsorber, identified as CA190) with a 95% VOC removal efficiency, unless the outlet concentrations from the carbon adsorber are equal to or less than 10 parts per million (ppm), based on a 3-hour block average, represents BACT for the transfer baghouse, identified as VS602.

Compliance Determination, Monitoring, and Testing Requirements

No new compliance determination, monitoring and testing requirements are included in the permit for the carbon adsorber, identified as CA190, due to this BACT analysis. The source will continue to comply with the existing compliance determination, monitoring and testing conditions for the carbon adsorber, identified as CA190, in the permit.

IDEM Contact

Questions regarding this proposed permit can be directed to Mehul Sura at the Indiana Department of Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5377 or toll free at 1-800-451-6027 extension 4-5377.