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

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 9, 2006

RE: Eli Lilly & Company / 157-21811-00006

FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot 03/23/06

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Mrs. Beth Brock
Team Leader, Environmental Services
Eli Lilly and Company, Tippecanoe Laboratories
1650 Lilly Road
Lafayette, IN 47909

May 9, 2006

Re: 157-21811-00006
Plantwide Applicability Limitations (PAL) Permit
and Third Significant Permit Modification to
Part 70 Permit No.: T157-6879-00006

Dear Mrs. Brock:

Eli Lilly and Company, Tippecanoe Laboratories was issued a Part 70 operation permit on February 27, 2004 for a stationary bulk pharmaceutical manufacturing plant located at 1650 Lilly Road, Lafayette, IN 47909. A letter requesting changes to this permit to include provisions for Plantwide Applicability Limitations (PAL) for nitrogen oxides (NOx) and sulfur dioxide (SO_2) was received by the Office of Air Quality (OAQ) on September 19, 2005. Pursuant to 326 IAC 2-7-12(d)(1)(A), the permit is being revised through a significant permit modification, since the PAL is added to the permit.

Pursuant to the provisions of 326 IAC 2-7-12(d)(1)(A) and IC 13-15-7-1, a significant permit modification is hereby approved as described in the attached Technical Support Document (TSD).

Other than the changes detailed in the TSD for this approval, all other conditions of the permit shall remain unchanged and in effect. Please find enclosed the entire modified permit document for final 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 Dr. Tripurari Sinha at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-3031 or toll free at 1-800-451-6027 extension 3-3031 or by e-mail at tsinha @idem.IN.gov.

Sincerely,

Original Signed By:
Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

TPS

Attachments: Technical Support Document and updated Part 70 permit
cc: File - Tippecanoe County
U.S. EPA, Region V
Tippecanoe County Health Department
Air Compliance Section Inspector - Wanda Stanfield
Compliance Data Section
Administrative and Development

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PART 70 OPERATING PERMIT AND PREVENTION OF SIGNIFICANT DETERIORATION (PSD) FLEXIBLE PERMIT AND PLANTWIDE APPLICABILITY LIMITATIONS (PAL) Permit

OFFICE OF AIR QUALITY

Eli Lilly and Company
Tippecanoe Laboratories Facility
1650 Lilly Road
Lafayette, Indiana 47909

(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.: T157-6879-00006	
Issued by: Original signed by Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: February 27, 2004 Expiration Date: February 27, 2009
First Significant Permit Modification No: 157-20216-00006, issued on January 19, 2005 First Administrative Amendment No: 157-20003-00006, issued on April 1, 2005 Second Administrative Amendment No: 157-21143-00006, issued on May 11, 2005 Second Significant Permit Modification No: 157-20732-00006, issued on August 15, 2005	
Third Significant Permit Modification No. 157-21811-00006	
Issued by: Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality	PAL Issuance Date: May 9, 2006 PAL Expiration Date: May 9, 2011 Part 70 Permit Issuance date; February 27, 2004 Expiration Date: February 27, 2009

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The remainder of the page is left blank intentionally.

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.

Responsible Official:	Mr. Lawrence J. McShane, General Manager
Source Address:	1650 Lilly Road, Lafayette, Indiana, 47909
Mailing Address:	1650 Lilly Road, Lafayette, Indiana, 47909
Source Phone Number:	(765) 477-4226
SIC Code:	2833, 2879
County Location:	Tippecanoe 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 three coal/natural gas-fired boilers equipped with an ash handling system and supported by a coal pile and coal conveyor system, and two natural gas boilers with fuel oil backup supplied by one fuel oil tank. The boilers provide steam to process operations in bulk pharmaceutical manufacturing and fermented products. The detailed equipment list is located in Section D.1 of this permit.

(b) D.2 Utilities Support Operations: The utility support facilities include the lime system for the potable water system (T9/T23), glycol tanks for heating and cooling of BPM tanks and chillers, generators and compressors. The detailed equipment list is located in Section D.2 of this permit.

(c) D.3 Fermented Products - Fermentation Operations: The fermentation processes include the dry material storage area (T46), the raw material prep area (T1), the fermentation production areas (T2, T2A, T2B, T2C) and product storage area (T63). The detailed equipment list is located in Section D.3 of this permit.

(d) D.4 Fermented Products - Purification Operations: The whole broth products from fermentation are stored in Building T63 and then continuously fed to the purification equipment as capacity allows. The purification department consists of extraction and elution processes (T3, T40, and T94), solvent recovery (T4), raw and recovered material storage (T147), and product storage (T39). The detailed equipment list is located in Section D.4 of this permit.

(e) D.5 Fermented Products - Support Operations: The support operations for the Fermented Products (FP) area consist of the FP wastewater treatment plant and FP

wastewater sludge storage operations. The detailed equipment list is located in Section D.5 of this permit.

(f) D.6 Bulk Pharmaceutical Manufacturing (BPM) - Process Operations: The emission units in the BPM production operations can be generally described as process vessels (tanks), crystallizers, filters, centrifuges, dryers, process scrubber systems, and process condenser systems and are referred to as process vents. The detailed equipment list is located in Section D.6 of this permit.

(g) D.7 BPM Support - Solvent Recovery Operations: The BPM solvent recovery emission units can be generally described as columns, stills, evaporators, accumulators and receivers and are referred to as process vents. The detailed equipment list is located in Section D.7 of this permit.

(h) D.8 BPM Individual Drain Systems (IDSs): The BPM IDSs consist of stationary systems used to convey waste streams to a waste management unit. Segregated stormwater sewer systems, designed and operated for the sole purpose of collecting rainfall-runoff at a facility, and segregated from all other IDSs, are excluded from this definition. The detailed equipment list is located in Section D.8 of this permit.

(i) D.9 BPM Support – Solvent Storage Tank Operations: The BPM solvent storage tanks are defined as any vessel designed to store raw material feedstocks or used solvent to be recovered that contain VOCs and/or VOHAP. Pressure vessels greater than 204.9 kPa without emissions to the atmosphere, vessels attached to motor vehicles, or vessels used to store beverage alcohol are not BPM solvent storage tanks. The detailed equipment list is located in Section D.9 of this permit.

(j) D.10 BPM Support – Waste Storage Tank Operations: The BPM waste storage tanks are defined as any waste management unit designed to contain an accumulation of 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 BPM waste storage tanks. The detailed equipment list is located in Section D.10 of this permit.

(k) D.11 BPM Waste Containers: Waste containers are segregated into small and large containers. A small BPM waste container, such as a drum, contains VOC/VOHAP with a capacity greater than 26.4 gallons and equal to or less than 110.5 gallons. A large BPM waste container, such as a melon or a tanker truck, contains 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.

(l) D.12 BPM Control Systems – T49 Liquid Waste Incinerator: The T49 liquid waste incinerator provides 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 T49 incinerator consists of a primary combustion chamber followed by a wet quench system, a condenser/absorber, a particulate matter scrubber, and a stack with continuous emissions monitoring. The detailed equipment list is located in Section D.12 of this permit.

(m) D.13 BPM Control Systems – T149 Solids-Liquid Waste Incinerator: The T149 solids-liquid waste incinerator provides treatment of Lilly hazardous and non-hazardous waste to support its operational requirements, including containerized waste (hazardous and non-hazardous), high Btu liquids (primary waste) and low Btu liquids (secondary waste). The T149 incinerator consists of a rotary kiln and vertical up-fired secondary combustion chamber (SCC), a wet ash handling system, a NO_x abatement system, a wet quench system, a condenser/absorber, a particulate matter scrubber, an induced draft (ID) fan, and a stack with continuous emissions monitoring. The detailed equipment list is located in Section D.13 of this permit.

(n) D.14 BPM Control Systems – RTO Operations: The regenerative thermal oxidizer (RTO) system consists of a closed-vent system that transports fume streams exhausted from the BPM manufacturing and support operations to the RTOs. The RTOs, designed to thermally destruct the VOC and/or VOHAP laden fume streams from the process and support operations, are also equipped with caustic scrubbing systems to control hydrogen halide and halogen emissions. The detailed equipment list is located in Section D.14 of this permit.

(o) D.15 BPM Control Systems – T79 Fume Incinerator Operations: The T79 fume incinerator system consists of a closed-vent system that transports fume streams exhausted from the BPM manufacturing and support operations to the T79 incinerator. The T79 incinerator, designed to thermally destruct the VOC and/or VOHAP laden fume streams from the process and support operations, are also equipped with caustic scrubbing systems to control hydrogen halide and halogen emissions. The detailed equipment list is located in Section D.15 of this permit.

(p) D.18 BPM – Chemical Wastewater Treatment Plant: The wastewater generated from the BPM operations is collected in wastewater holding tanks, transferred through a clarification process, followed by the biological treatment facility. The detailed equipment list is located in Section D.18 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.3 Fermented Products - Fermentation Operations: Various mixers, bump tanks and fermenter tanks in the fermentation operations each emitting less than 5 pounds PM10 per hour or 25 pounds PM10 per day. [326 IAC 6-3]

(2) D.8 BPM Individual Drain Systems (IDSs): Individual drain systems (sumps) in the BPM operating areas each emitting less than less than 3 pounds VOC per hour or 15 pounds VOC per day. [40 CFR 63.1256(e), 40 CFR 63.689(b), and 326 IAC 2-2]

(3) D.10 BPM Support – Waste Storage Tank Operations: Various BPM waste tanks and knock out pots in the BPM operating areas 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]

(4) D.11 BPM Waste Containers: Small and large waste containers in the BPM operating areas each emitting less than 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]

(5) D.6 BPM Production Operations: Heat exchange systems in the BPM operating areas are classified as insignificant activities under the closed loop heating and cooling system clause pursuant to 326 IAC 2-7-1(21)(FF). [40 CFR 63.1252(c)]

(6) D.16 Research and Development Operations: The T71 equipment components from process piping systems, including pumps, valves, and piping connections [flanges] are classified as insignificant activities under the research and development facility clause pursuant to 326 IAC 2-7-1(21)(E). [40 CFR 63.1255 and 40 CFR 61, Subpart V]

(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 10 MMBtu per hour;

(2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than 6 MMBtu per hour;

(3) Equipment powered by internal combustion engines of capacity equal to or less than 0.5 MMBtu per hour, except where total capacity of equipment operated by one stationary source exceeds 2 MMBtu per hour;

(4) A gasoline fuel transfer and dispensing operation handling less than or equal to 1300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;

(5) 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;

(6) VOC/HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;

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

(8) Refractory storage not requiring air pollution control equipment;

(9) Machining where an aqueous cutting coolant continuously floods the machining interface;

(10) Degreasing operations that do not exceed 145 gallons of solvent usage per 12 months, except if subject to 326 IAC 20-6;

(11) Cleaners and solvents having a vapor pressure equal to or less than 2kPa measured at 38°C or having a vapor pressure equal to or less than 0.7kPa measured at 20°C and not exceeding a combined usage rate of 145 gallons per 12 months;

(12) Closed loop heating and cooling systems; [See Section D.2]

(13) Structural or fabrication cutting 200,000 linear feet or less of one inch plate or equivalent or using 80 tons or less of welding consumables;

(14) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;

(15) 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;

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

(17) Forced and induced draft noncontact cooling tower systems not regulated under a NESHAP;

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

(19) Heat exchanger cleaning and repair;

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

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

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

(23) Covered conveyors for coal or coke conveying of less than or equal to 360 tons per day; [See Section D.1]

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

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

(26) 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;

(27) 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;

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

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

(30) Gasoline emergency generators not exceeding 110 horsepower;

(31) Diesel emergency generators not exceeding 1600 horsepower; [See Section D.2]

(32) Natural gas emergency turbines or reciprocating engines not exceeding 16,000 horsepower;

(33) Other emergency equipment such as stationary fire pumps; [See Section D.2]

(34) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations;

(35) Purge double block and bleed valves;

(36) Filter or coalescer media changeout;

(37) Vents from ash transport systems not operated at positive pressures;

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

(39) Research and development facility as defined in 326 AIC 2-7-1(E); [See Section D.21]

(40) Farm operations; and

(41) Other activities below insignificant threshold levels:

(A) Portable cleaning and collection tanks less than 3 pounds VOC per hour or 15 pounds VOC per day;

(B) T4 sulfuric acid tank less than 5 pounds PM10 per day or 25 pounds PM10 per day;

(C) T47 trash transfer less than 5 pounds PM10 per day or 25 pounds PM10 per day;

(D) Sump tanks less than 3 pounds VOC per hour or 15 pounds VOC per day;

(E) T116 hydrochloric acid tank less than 5 pounds single HAP per day or 1 ton single HAP per year;

(F) T14 Ranney Well less than 5 pounds single HAP per day or 1 ton single HAP per year;

(G) T99 ethylene glycol expansion tanks/system less than 12.5 pounds combined HAP per day or 2.5 tons combined HAP per year;

(H) T100 MACE tanks/system less than 12.5 pounds per day or 2.5 tons combined HAP per year;

(I) T100 Unit 1 drumming operations less than 5 pounds PM10 per day or 25 pounds PM10 per day;

(J) T99/T100 solids particle sizing equipment (mills and delumpers) less than 5 pounds PM10 per day or 25 pounds PM10 per day; and

(K) Various fermentation and purification operations less than 3 pounds VOC per hour or 15 pounds VOC per day, less than 12.5 pounds per day or 2.5 tons combined HAP per year; and less than 5 pounds PM10 per day or 25 pounds PM10 per day. [See Section D.3 and D.4]

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

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

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

(a) This permit, T157-6879-00006, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 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 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. 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
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 timeframe, 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
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 and, otherwise, such Plan is deemed to satisfy the applicable PMP requirements 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
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 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 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 60, Subpart Db – Industrial-Commercial-Institutional steam generating units:** This source is not subject to 40 CFR Part 60, Subpart Db because none of the boilers at plant site were constructed, reconstructed, or modified after June 19, 1984. [40 CFR 60.40b(a)]

(3) **40 CFR 60, Subpart Dc – Industrial-Commercial-Institutional steam generating units:** This source is not subject to 40 CFR Part 60, Subpart Dc because none of the boilers at plant site were constructed, reconstructed, or modified after June 9, 1989. [40 CFR 60.40c(a)]

(4) **40 CFR 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)]

(5) **40 CFR 60, Subparts Ec and CCCC – Hospital/Medical/Infectious waste incinerators and Commercial-Industrial solid waste incinerators:** This source is not subject to 40 CFR Part 60 Subpart Ec or Subpart CCCC because the combustors at the site are required to have a permit pursuant to Section 3005 of the Solid Waste Disposal Act. [40 CFR 60.50c(d) and 40 CFR 60.2020(g)]

(6) **40 CFR 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].

(7) **Section 111(d) Emission Guidelines:** None of the 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. 40 CFR Part 60, Subpart Ce and 326 IAC 11-6, and 40 CFR Part 60, Subpart DDDD and 326 IAC 11-8 are not applicable to this source because combustors at the site are required to have a permit pursuant to Section 3005 of the Solid Waste Disposal Act. [40 CFR 60.32e(d) and 40 CFR 60.2555(g)]

(8) **40 CFR 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)]

(9) **40 CFR 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.

(10) **40 CFR 61, Subpart FF – Benzene Waste Operations:** This source does not handle more than 10 megagrams of benzene waste per year. Therefore the source is not subject to requirements of 40 CFR Part 61, Subpart FF.

(11) **40 CFR 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 20-10) 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)]

(12) **40 CFR 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]

(13) **40 CFR 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]

(14) **40 CFR 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]

(15) **40 CFR 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]

(16) **40 CFR 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]

(17) **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.

(18) **326 IAC 8-3 – Organic Solvent Degreasing Operations:** This source does not own or operate degreasing facilities containing organic solvent. Therefore, the requirements of 326 IAC 8-3-3/326 IAC 8-3-6 do not apply.

(19) **40 CFR 63, Subpart FFFF** – Miscellaneous Organic Chemical Production and Processes: This source is not subject to 40 CFR Part 63, Subpart FFFF because all the affected facilities at the source that would otherwise be subject to Subpart FFFF are subject to 40 CFR 63, Subpart GGG.

(20) **40 CFR 63, Subpart GGGGG** – Site Remediation: This source is not subject to 40 CFR Part 63, Subpart GGGGG because the site remediation activities at Tippecanoe Laboratories are being performed under a RCRA corrective action program at a treatment, storage and disposal facility.

(21) **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.

(22) **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.

(23) **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 NOx emission control requirements of that rule.

(24) **326 IAC 11 – Emission Limitations for Specific Types of Operations:** This source does not contain any emission units described in 326 IAC 11. Therefore, the source is not subject to the requirements of those rules.

(25) **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.

(26) **326 IAC 21 – Acid Deposition:** This source does not contain any emission units described in 326 IAC 21. Therefore, the source is not subject to the requirements of those rules.

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

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

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

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

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

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

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

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

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

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

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

(a) Terms and conditions of previous permits 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) All previous registrations and permits are superseded by this 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 - 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
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,
Indianapolis, Indiana 46204-2251

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

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

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

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

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

B.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
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 limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

(c) Emission Trades [326 IAC 2-7-20(c)]

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

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]

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

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

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

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

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

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
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, I/M & Billing Section), to determine the appropriate permit fee.

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.

B.26 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 emissions unit to which the condition pertains permanently ceases operation.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 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 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment is in operation.

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 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

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

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

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

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

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

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

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

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

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

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

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source 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. Section C.11 (Maintenance of Continuous Emission Monitoring Equipment) establishes the general operation and maintenance

requirements for continuous emission monitoring systems and continuous opacity monitoring systems.

(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
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
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 calibration gas audits and relative accuracy test audits for each calendar quarter within thirty (30) calendar days after the end of each 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) The permittee shall prepare and submit to IDEM, OAQ a written standard operating procedure (SOP) within ninety (90) days after monitor installation. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a). 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.

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

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

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

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on December 13, 2000.

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

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

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

C.14 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 and Start-up, Shutdown, and Malfunction (SSM) Plan) under 40 CFR 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 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 Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan) and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan) to include such response steps taken.

The OMM Plan (or Parametric Monitoring and SMM Plan) shall be submitted within the time frames specified by the applicable 40 CFR60/63 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 Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan); or

(2) If none of the reasonable response steps listed in the Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan (or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (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 compliance 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-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.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

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

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

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

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

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

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 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
Indianapolis, Indiana 46204-2251

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

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

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

(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, or report. 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)) at an existing emissions unit, other than projects at a source with Plant-wide Applicability Limitation (PAL)), which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1 (rr)), the Permittee shall comply with following:

(1) construction of the "project" (as defined in 326 IAC 2-2-1 (qq) 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

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

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

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
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. Unless otherwise specified in this permit, 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 year" means the twelve (12) month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C.17 for any "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C.17 exceed the baseline actual emissions, as documented and maintained under Section C.17(c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C.17(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 (c)(2) and (3) in Section C.17.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).

(4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C.17 available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

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

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

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SECTION D.1 UTILITIES OPERATION 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:

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

Emission* Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T6:					
BLR001	Coal/Natural Gas Boiler	S-T6-BLR001	92	MMBtu/hr	Multiclone001
BLR002	Coal/Natural Gas Boiler	S-T6-BLR002	92	MMBtu/hr	Multiclone002
BLR003	Coal/Natural Gas Boiler	S-T6-BLR003	92	MMBtu/hr	Multiclone003
BLR004	Natural Gas/Fuel Oil Boiler	S-T6-BLR004	142	MMBtu/hr	None
BLR005	Natural Gas/Fuel Oil Boiler	S-T6-BLR005	97	MMBtu/hr	None
CONASH	Ash Handling System	PV-T6-CONASH	1805	lbs/hr	Baghouse

* In this permit, boilers BLR001, BLR002, BLR003, BLR004, and BLR005 are referred to as Boilers 1, 2, 3, 4, and 5, respectively.

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

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Outside Building T6:					
OILTK001*	Fuel Oil Storage Tank	PV-T6-OILTK001	250,000	gallons	None
COAL	Coal Pile	N/A	N/A	N/A	N/A
CNV001-CNV005	Covered Coal Conveyor System	N/A	N/A	N/A	N/A

* Emission units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21). Specifically, the fuel oil storage tank is an insignificant activity pursuant to 326 IAC 2-7-1(21)(A)-(C).

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

D.1.1 Particulate Matter (PM) Limitations [326 IAC 6-2-3, 326 IAC 6-3, and PC (79) 1510 Issued March 22, 1982 (Revised by this permit)]

(a) Pursuant to 326 IAC 6-2-3(b) (Particulate Matter Emission Limitations for Sources of Indirect Heating), particulate emissions from each coal/natural gas-fired boiler (Boilers 1, 2, and 3) shall not exceed 0.56 pounds per million British thermal units (MMBtu) heat input.

(b) Pursuant to 326 IAC 6-2-3(c) (Particulate Matter Emission Limitations for Sources of Indirect Heating), particulate emissions from Boiler 4 shall not exceed 0.39 pounds per MMBtu heat input.

(c) Pursuant to 326 IAC 6-2-3(c) (Particulate Matter Emission Limitations for Sources of Indirect Heating), particulate emissions from Boiler 5 shall not exceed 0.31 pounds per MMBtu heat input.

(d) Pursuant to 326 IAC 6-3-2, particulate matter emissions from the ash handling system shall not exceed 3.83 pounds per hour based on a maximum throughput of 0.902 tons of ash per hour.

D.1.2 Sulfur Dioxide (SO_2) Limitations [326 IAC 7-1.1-2, and PC (79) 1510 Issued March 22, 1982 (Revised by this permit)]

(a) Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO_2 emissions from each of the coal/natural gas-fired boilers (Boilers 1, 2 and 3) shall not exceed 6.0 pounds per MMBtu heat input.

(b) Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO_2 emissions from Boiler 4 shall be limited to 0.5 pounds per MMBtu heat input, when burning No. 2 fuel oil. Pursuant to 326 IAC 7-2-1, compliance with this standard is based on a calendar month average. This emission limit correlates to a maximum fuel oil sulfur content of 0.49 percent by weight.

(c) Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO_2 emissions from Boiler 5 shall not exceed 0.5 pounds per MMBtu heat input, when burning No. 2 fuel oil. This emission limit correlates to a maximum fuel oil sulfur content of 0.49 percent by weight.

D.1.3 Reserved

D.1.4 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 – 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 - 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 - 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.1.5 Preventive Maintenance Plans/Start-up Shutdown, and Malfunction Plans [326 IAC 2-7-5(13)] [40 CFR Part 63, Subpart DDDDD]

(a) Until September 12, 2007 or until startup of new boilers, whichever is first, a Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the coal/natural gas-fired boilers and associated multiclone control devices.

(b) After September 12, 2007 or upon startup of new boilers, whichever is first, a Start-Up Shutdown, and Malfunction Plan is required for each boiler as required by 40 CFR 63 Part DDDDD, and in accordance with Section B – Preventative Maintenance Plan, of this permit.

Additional Emission Limitations and Standards are included in Conditions D.1.17 and D.1.18.

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

D.1.6 Testing Requirements [326 IAC 2-7-6(1), (6)] [40 CFR Part 63, Subpart DDDDD]

(a) The Permittee shall perform particulate matter performance tests for Boilers 1, 2 and 3 utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM or other methods as approved by the Commissioner. These tests shall be repeated every third calendar year from the calendar year of the most recently completed compliance stack test. The requirements for conducting performance tests are described in Section C – Performance Testing.

(b) No emissions testing is required for the boilers for compliance with particulate matter for boilers 4, and 5, limit established in Conditions D.1.1 at this time. However, IDEM may require performance testing when necessary to determine compliance. The requirements for conducting performance tests are described in Section C – Performance Testing.

(c) All performance testing and/or fuel analyses shall be performed as required by 40 CFR 63 Part DDDDD.

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

The Permittee shall collect coal sampling and analysis data on a calendar month average in accordance with one of the following methods specified in 326 IAC 3 for each of the coal/natural gas-fired boilers (Boilers 1, 2 and 3):

(a) Coal sampling and analysis shall be 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) Sample and analyze the coal pursuant to 326 IAC 3-7-2(b).

(b) Upon written notification to IDEM by a facility owner or operator, 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.1.8 Fuel Oil Sampling and Analysis for SO_2 [326 IAC 7-2]

The Permittee shall utilize one of the following methods for Boilers 4 and 5 when burning fuel oil:

(a) Provide vendor analysis of quantity, heat content and sulfur content of fuel delivered, if accompanied by a certification;

(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; or

(c) Conduct a stack test for sulfur dioxide emissions from the boiler, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(d)]

D.1.9 Reserved

D.1.10 Alternative Operating Scenarios

(a) The Permittee may elect to perform the tests in D.1.6(a) while burning a mixture of natural gas and coal (co-fire). The Permittee shall inform IDEM in writing whenever the Co-Fire operating scenario is used, in which case the following monitoring requirements and limits apply.

(1) The Permittee shall install and operate a gas flow meter and a steam flow rate flowmeter on each boiler where the co-fire option is used. A Preventative Maintenance Plan, in accordance with Section B – Preventative Maintenance Plan, is required for the monitors.

(2) The 24-hour daily average gas ratio (R) shall be greater than or equal to the value determined in the most recent performance test. The gas ratio shall be calculated by:

$$R = \text{Average}\ (N_1/S_1 + N_2/S_2 + \ldots + N_i/S_i)$$

Where N_i = natural gas flow rate, in acfm, for each 15 minute period
S_i = steam flow rate from boiler, in lb/hr, for each 15 minute period

(3) If the 24-hour daily gas ratio falls below the gas ratio established pursuant to the performance test, or if the gas-burners fail to operate in a normal manner, the permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(b) If the Permittee has conducted a performance test under co-fired conditions to establish a minimum gas ratio, but subsequently wants to operate a boiler without natural gas co-

fired or at a gas ratio that is lower than the ratio established at the performance test, then the Permittee must demonstrate that particulate matter emissions are less than the emission limits in D.1.1(a) pursuant to a performance test as described in D.1.6(a) under the desired operating conditions. The Permittee may not begin to operate under the new conditions until the performance test results are submitted to IDEM, OAQ.

D.1.11 Visible Emission Notations

(a) Visible emission notations of the stack exhausts of Boilers 1, 2 and 3 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) The Compliance Response Plan for the boilers shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

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

D.1.12 Coal Characteristics and Consumption Records

The Permittee shall record the information described in items (a) through (d) below on a calendar month basis for Boilers 1, 2, and 3.

(a) The amount (expressed in tons) of coal burned;

(b) The average sulfur content (expressed in percentage) of coal burned;

(c) The average heat content (expressed in Btu per pound) of the coal burned; and

(d) The average sulfur dioxide emission rate (expressed in pounds per MMBtu).

D.1.13 Fuel Oil Characteristics and Consumption Records

The Permittee shall record the information described in item (a) through (d) below on a calendar month basis for Boiler 4, and Boiler 5:

(a) The amount (expressed in thousands of gallons (Mgal)) of No. 2 fuel oil burned in Boilers 4 and 5;

(b) The average sulfur content (expressed in percentage by weight) of the No. 2 fuel oil burned in Boilers 4 and 5;

(c) The average higher heating value (expressed in Btu per gallon) of the No. 2 fuel oil burned in Boilers 4 and 5; and

(d) The average sulfur dioxide emission rate (expressed in pounds per MMBtu) of the No. 2 fuel oil for Boilers 4 and 5.

D.1.14 Reserved

D.1.15 Standard Operating Procedures

Pursuant to 326 IAC 3-7-5(a), the Permittee shall maintain and implement a standard operating procedure (SOP) for coal sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2. In addition, any revision to the SOP shall be submitted to IDEM, OAM.

D.1.16 Visible Emissions Notations

The Permittee shall record the visible emissions notations of the coal/natural gas-fired boilers stack exhaust in accordance with Condition D.1.11.

D.1.17 Record Keeping Requirements

(a) Records and data required by D.1.10 shall be maintained for boilers operating under the co-fire scenario.

(b) After September 12, 2007 or upon startup on new boilers, whichever is first, the applicable record keeping requirements of 40 CFR 63 Part DDDDD shall apply.

D.1.18 Reporting Requirements

(a) The Permittee shall submit quarterly summary reports of the monthly coal characteristic and consumption records required by Condition D.1.12 for Boilers 1, 2 and 3.

(b) The Permittee shall submit quarterly summary reports of the monthly fuel oil characteristic and consumption records required by Condition D.1.13 for Boilers 4 and 5.

(c) Reserved

(d) All reports shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Additional Record Keeping and Reporting Requirements are included in Conditions D.1.22 and D.1.23.

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

D.1.19 Modifications and Construction: Advance Approval of Permit Conditions Requirements

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

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

D.1.20 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

(a) After September 12, 2007 or upon startup of new boilers, whichever is first, the Permittee shall comply with the emission limitations and standards of 40 CFR 63, Subpart DDDDD.

(b) Since the applicable requirements associated with the compliance options for the affected sources are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition, except as otherwise provided in this condition.

D.1.21 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A] [40 CFR Part 63, Subpart DDDDD]

(a) Pursuant to 40 CFR 63.7565, the provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the affected source for the large solid fuel subcategory (Boilers 1, 2, and 3) and the affected source large gaseous fuel subcategory (Boilers 4 and 5), except when otherwise specified in 40 CFR 63 Subpart DDDDD. The Permittee must comply with 40 CFR 63 Subpart A as stated in 40 CFR 63.7565.

(b) Since the applicable requirements associated with the compliance options for the affected sources are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition, except as otherwise provided in this condition.

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

D.1.22 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters - Notification Requirements [40 CFR 63, Subpart DDDDD]

(a) After September 12, 2007 or upon startup of new boilers, whichever is first, the applicable notification and reporting requirements of 40 CFR 63 Part DDDDD shall apply.

(b) All notifications and reports shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit. The notifications do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

D.1.23 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12] [326 IAC 2-7-5] [40 CFR Part 63, Subpart DDDDD]

The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information regarding which compliance option or options will be chosen in the Part 70 permit for the affected source for the large solid fuel subcategory (Boilers 1, 2, and 3).

(a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 permit the applicable requirements of 40 CFR 63, Subpart DDDDD, a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.

(b) The significant permit modification application shall be submitted no later than nine months prior to September 12, 2007.

(c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

SECTION D.2 UTILITIES SUPPORT OPERATION 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:

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

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T6:					
T121	Diesel Generator	N/A	1250	KW	None

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

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T5:					
T5*	Diesel Generator	N/A	380	HP	None
Portable Units:					
T62*	Diesel Generator	N/A	1100	KW	None
T135*	Diesel Generator	N/A	390	HP	None
T78*	Diesel Compressor	N/A	58	KW	None
T89-1*	Diesel Compressor	N/A	58	KW	None
T89-2*	Diesel Compressor	N/A	58	KW	None
Building T97/T98:					
T97/T98*	Glycol System	N/A	45,000	gallon	None
Building T9/T23:					
T9/T23*	Lime Storage Silo	N/A	79.5	lb/hr	None

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

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

D.2.1 Nitrogen Oxide (NOx) Emission Limitations [326 IAC 2-2 and CP 157-3319 Issued February 21, 1995]

Generator T121 shall not exceed 900 hours of operation per 12 consecutive month period rolled on a monthly basis. This operational limitation limits NOx emissions to less than 40 tons per year; therefore, the Prevention of Significant Deterioration (PSD) rules pursuant to 326 IAC 2-2 does not apply.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is not required for the facility described in this Section.

Testing and Monitoring Requirements

D.2.3 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

No emissions testing is required for the emission units described in this Section, at this time, but IDEM may require compliance 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 – Performance Testing.

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

D.2.4 Generator Hours of Operation

The Permittee shall record the actual hours of operation for Generator T121. The records shall report the actual hours of operation per 12-month period, rolled on a monthly basis using the reporting form located at the end of this permit, or equivalent.

D.2.5 Reporting Requirements

A quarterly report of the information specified in Condition D.2.4 shall be submitted to the address listed in Section C - General Reporting Requirements, within thirty (30) days after the end of the quarter being reported. This report submitted by the Permittee requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

SECTION D.3 FERMENTATION OPERATION 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:

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

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T1 – Raw Material Prep Area:					
MIX001*	Dry Raw Material Mixer	PV-T1-T52348	N/A	N/A	Dust Collector T52348**
MIX002*	Dry Raw Material Mixer	PV-T1-T52348	N/A	N/A	
MCNV001	Conveyor of Raw Material Mixers	PV-T1-T52348	N/A	N/A	
Building T2 – Fermentation Production Area:					
TK001*	Bump Tank	S-T2-FERM	5000	liters	None
TK002*	Bump Tank	S-T2-FERM	5000	liters	None
TK003*	Bump Tank	S-T2-FERM	5000	liters	None
TK004*	Bump Tank	S-T2-FERM	5000	liters	None
TK011*	Bump Tank	S-T2-FERM	5000	liters	None
TK012*	Bump Tank	S-T2-FERM	5000	liters	None
TK013*	Bump Tank	S-T2-FERM	5000	liters	None
TK014*	Bump Tank	S-T2-FERM	5000	liters	None
TK005*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T67457**
TK006*	Fermentor Tank	S-T2-FERM	60000	liters	
TK007*	Fermentor Tank	S-T2-FERM	60000	liters	
TK008*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T67458**
TK009*	Fermentor Tank	S-T2-FERM	60000	liters	
TK010*	Fermentor Tank	S-T2-FERM	60000	liters	
TK015*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T67462**
TK016*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T67463**
TK017*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T67464**
TK018*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T65689**
TK019*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T52221**
TK020*	Fermentor Tank	S-T2-FERM	60000	liters	Cyclone T52228**

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T2A – Fermentation Production Area:					
TK021*	Bump Tank	S-T2-FERM	10000	liters	None
TK022*	Bump Tank	S-T2-FERM	10000	liters	None
TK023*	Bump Tank	S-T2-FERM	10000	liters	None
TK024*	Bump Tank	S-T2-FERM	10000	liters	None
TK025*	Fermentor Tank	S-T2-FERM	120000	liters	Cyclone T67459**
TK026*	Fermentor Tank	S-T2-FERM	120000	liters	
TK027*	Fermentor Tank	S-T2-FERM	120000	liters	
TK028*	Fermentor Tank	S-T2-FERM	120000	liters	Cyclone T67696**
TK029*	Fermentor Tank	S-T2-FERM	120000	liters	Cyclone T67697**
TK030*	Fermentor Tank	S-T2-FERM	120000	liters	Cyclone T67698**
Building T2C – Fermentation Production Area:					
TK043*	Bump Tank	S-T2-FERM	37625	liters	Cyclone T65363**
TK044*	Bump Tank	S-T2-FERM	37625	liters	Cyclone T65364**
TK048*	Fermentor Tank	S-T2-FERM	254000	liters	Cyclone T65367**
TK049*	Fermentor Tank	S-T2-FERM	254000	liters	Cyclone T65359**
TK050*	Fermentor Tank	S-T2-FERM	254000	liters	Cyclone T65360**

* Emissions units marked with a single asterisk are insignificant activities as defined in 326 IAC 2-7-1(21)(A)-(C).
** All control devices are voluntary units and are not required to demonstrate compliance with any applicable regulations.

(b) The following emissions units are insignificant activities pursuant to 326 IAC 2-7-1(21)(A)-(C) and are not subject to applicable requirements described in this D section:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T46 – Material Storage Area:					
BIN001	Dry Raw Material Storage Bin	PV-T46-T67454	23000	liters	Baghouse T67454**
BIN002	Dry Raw Material Storage Bin	PV-T46-T67454	23000	liters	
BIN003	Dry Raw Material Storage Bin	PV-T46-T67454	23000	liters	
BIN004	Dry Raw Material Storage Bin	PV-T46-T67454	23000	liters	
BIN005	Dry Raw Material Storage Bin	PV-T46-T67455	23000	liters	Baghouse T67455**
BIN006	Dry Raw Material Storage Bin	PV-T46-T67455	23000	liters	
BIN007	Dry Raw Material Storage Bin	PV-T46-T67455	23000	liters	
BIN008	Dry Raw Material Storage Bin	PV-T46-T67455	23000	liters	
BIN009	Dry Raw Material Storage Bin	PV-T46-T67659	23000	liters	Baghouse

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
BIN010	Dry Raw Material Storage Bin	PV-T46-T67659	23000	liters	T67659**
BIN011	Dry Raw Material Storage Bin	PV-T46-T67456	23000	liters	Baghouse T67456**
BIN012	Dry Raw Material Storage Bin	PV-T46-T67456	23000	liters	
Building T1 – Raw Material Prep Area:					
BLO001	Railcar Pneumatic Conveyor	N/A	N/A	liters	None
DISP001	Automated Dispensing Station	PV-T1-T44984	N/A	liters	Dust Collector T44984**
DISSC001	Dispensing Scale	PV-T1-T44984	N/A	liters	
TK121	Make Up Tank	PV-T1-314512	10150	liters	Rotoclone 314512**
TK122	Make Up Tank	PV-T1-314512	10150	liters	
TK123	Make Up Tank	PV-T1-314512	2100	liters	
TK123A	Make Up Area Tank	N/A	380	liters	None
TK124	Make Up Tank	PV-T1-314512	2100	liters	Rotoclone 314512**
TSLU	Slurry Tank	N/A	3600	liters	None
TK125	Make Up Tank	PV-T1-T67489	24600	liters	Rotoclone T67489**
TK126	Make Up Tank	PV-T1-T67492	24600	liters	Rotoclone T67492**
SC001	Liquid Weigh Scale Tank	N/A	N/A	liters	None
Building T1 – Liquid Storage Area:					
TK231	Liquid Storage Tank	N/A	20000	liters	None
TK232	Whole Broth Storage Tank	N/A	200000	liters	None
TK233	Whole Broth Storage Tank	N/A	200000	liters	None
TK234	Whole Broth Storage Tank	N/A	200000	liters	None
TK235	Whole Broth Storage Tank	N/A	200000	liters	None
TK236	Waste Holding Tank	N/A	200000	liters	None
TK237	Liquid Storage Tank	N/A	200000	liters	None
TK241	Liquid Storage Tank	N/A	100000	liters	None
TK242	Liquid Storage Tank	N/A	100000	liters	None
TK243	Liquid Storage Tank	N/A	100000	liters	None
TK244	Liquid Storage Tank	N/A	100000	liters	None
TK245	Liquid Storage Tank	N/A	100000	liters	None
TK246	Liquid Storage Tank	N/A	100000	liters	None
TK247	Liquid Storage Tank	N/A	100000	liters	None
TK248	Liquid Storage Tank	N/A	30400	liters	None
TK249	Liquid Storage Tank	N/A	45300	liters	None
Building T1 – Filter Room:					
TK813	Lime Tank	PV-T1-316488	8600	liters	Rotoclone 316488**
TK814	Filter Room Tank (Tank 8.5)	PV-T1-316488	9600	liters	

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
TK143	Slurry Tank	N/A	3800	liters	None
TK144	Slurry Tank	N/A	3800	liters	None
Building T63 – Product Storage Area:					
TK255	Whole Broth Tank	N/A	94700	liters	None

** All control devices are voluntary units and are not required to demonstrate compliance with any applicable regulations.

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

D.3.1 Non-Applicability Determination of Pharmaceutical MACT Standards [40 CFR 63, Subpart GGG]

The emission units associated with the fermentation operations are not subject to the requirements of 40 CFR 63, Subpart GGG (Pharmaceutical MACT Standards) because these emission units do not process, use, or produce hazardous air pollutant (HAP) emissions in excess of 50 ppmv pursuant to 40 CFR 63.1251 (Process Vent Definition).

D.3.2 Non-Applicability Determination of State VOC Emission Standards [326 IAC 8-5-3, 326 IAC 8-1-6]

(a) The emission units associated with the fermentation operations do not manufacture pharmaceutical products by chemical synthesis. Therefore, the emission units associated with the fermentation operations are not subject to the requirements of 326 IAC 8-5-3 (VOC Emission Limitations for Synthesized Pharmaceutical Manufacturing Operations).

(b) The emission units associated with the fermentation operations are not subject to the requirements of 326 IAC 8-1-6 (Best Available Control Technologies for VOC Emissions) because the VOC emissions associated with each emission unit or emission project are less than 25 tons per year.

D.3.3 Particulate Matter (PM) Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, Registration 157-3220 Issued September 3, 1993, Registration 157-4466 Issued May 8, 1995, and Registration 157-7144 Issued December 4, 1996, the emission units presented in the table below shall not exceed the following particulate matter emission rates based on the following maximum throughput rates:

Emission Unit Description	Emission Unit ID	Maximum Process Weight Rate (ton/hr)	Allowable PM Emission Rate (lb/hr)
Building T1 – Raw Material Prep Area:			
Dry Raw Material Mixers + Conveyor for Mixers	MIX001, MIX002, MCNV001	0.881	3.77, combined
Building T2 – Fermentation Production Area:			
Bump Tanks	TK001 – TK004	18.3	28.7, combined
Fermentor Tanks	TK005 – TK010		
Bump Tanks	TK011 – TK014		
Fermentor Tanks	TK015 – TK020		

Emission Unit Description	Emission Unit ID	Maximum Process Weight Rate (ton/hr)	Allowable PM Emission Rate (lb/hr)
Building T2A – Fermentation Production Area:			
Bump Tanks	TK021 – TK024	18.3	28.7, combined
Fermentor Tanks	TK025 – TK027, TK029 – TK030		
Fermentor Tank	TK028		
Building 2C – Fermentation Production Area:			
Bump Tanks	TK043 – TK044	31.6	5.5, combined
Fermentor Tanks	TK048 – TK050		

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is not required for any of the emission units or control devices described in this Section.

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

D.3.5 Testing Requirements [326 IAC 2-7-6(1), (6)]

No emissions testing is required for the emission units described in this Section at this time, but IDEM may require compliance 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 – Performance Testing.

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

D.3.6 Modifications and Construction: Advance Approval of Permit Conditions Requirements

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

SECTION D.4 FERMENTED PRODUCTS - PURIFICATION OPERATION 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:

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

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T3 – Purification Production Area:					
T3-RVD040	Rotary Vacuum Dryer	Vent	500	gallons	Dust Collector**
Building T147 – Storage Tank Module:					
T147-TK001	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK002	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK003	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK004	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK005	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK006	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK007	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK008	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK009	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK010	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK011	Storage Tank	Vent	19000	gallons	Vent Condenser**
T147-TK012	Storage Tank	Vent	19000	gallons	Vent Condenser**

** All control devices are voluntary units and are not required to demonstrate compliance with any applicable regulations.

(b) The following emission units are not subject to applicable requirements described in this D section:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Building T3 – Purification Production Area:					
T3-TK47718*	Azo Receiver Tank	Vent	1000	gallons	None
T3-TK56*	Vent Condensate Tank	Vent	30	gallons	None
T3-CENT001*	Stacked Plate Centrifuge	Vent	20	gallons	None
T3-CENT002*	Stacked Plate Centrifuge	Vent	20	gallons	None
T3-CENT003*	Stacked Plate Centrifuge	Vent	20	gallons	None
T3-CENT004*	Stacked Plate Centrifuge	Vent	20	gallons	None
T3-COL001*	East Carbon Column	Vent	200	gallons	None

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
T3-TK261*	Process Tank	Vent	500	gallons	None
T3-TK327-1T*	Process Tank	Vent	500	gallons	None
T3-TK330*	Process Tank	Vent	4000	gallons	None
T3-TK332-3T*	Process Tank	Vent	3000	gallons	None
T3-TK337-1T*	Process Tank - Acid tank	Vent	500	gallons	None
T3-TK338-1T*	Process Tank	Vent	500	gallons	None
T3-TK338-2T*	Process Tank	Vent	500	gallons	None
T3-TK341-1T*	Process Tank	Vent	500	gallons	None
T3-TK346-1T*	Amyl Acetate Tank	Vent	500	gallons	None
T3-TK353-1T*	Receive Amyl Acetate from EVAP305	Vent	1000	gallons	None
T3-TK355-1T*	Process Tank	Vent	1000	gallons	None
T3-TK357-1T*	Process Tank	Vent	1000	gallons	None
T3-TK376-1T*	Process Tank	Vent	2000	gallons	None
T3-TK376-2T*	Process Tank	Vent	2000	gallons	None
T3-TK376-3T*	Process Tank	Vent	2000	gallons	None
T3-TK378-1T*	Process Tank	Vent	500	gallons	None
T3-TK394*	Chemical Waste Tank	Vent	2000	gallons	None
T3-TK397-1T*	Spent Aqueous Tank	Vent	2000	gallons	None
T3-TK399*	Acid Wash Tank	Vent	500	gallons	None
T3-EVAP300*	Swenson Evaporator	Vent	400	gallons	None
T3-EVAP305	Evaporator	Vent	800	gallons	None
T3-COL002*	West Carbon Column	Vent	200	gallons	None
Building T40 – Purification Production Area:					
T40-TK050*	Holding Tank	Vent	750	gallons	None
T40-TK051*	Tank	Vent	2000	gallons	None
T40-TK052*	Tank	Vent	2000	gallons	None
T40-TK053*	Holding Tank	Vent	2000	gallons	None
T40-TK055	Tank	Vent	500	gallons	None
T40-TK060*	Still	Vent	2000	gallons	None
Building T4 – Solvent Recovery:					
T4-COL001	Distilling Column	Vent	269	cf	None
T4-TK001*	Process Tank	Vent	1985	gallons	None
T4*	Tylosin System	Vent	N/A	N/A	None
T4-TK101*	Process Tank	Condenser	25000	gallons	Vent Condenser**
Building T39 – Product Storage:					
T39-TK021*	Storage Tank	Vent	2000	gallons	None

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
T39-TK022*	Storage Tank	Vent	2000	gallons	None
T39-TK023*	Storage Tank	Vent	2000	gallons	None
T39-TK030*	Storage Tank	Vent	5000	gallons	None
T39-TK031*	Storage Tank	Vent	5000	gallons	None
T39-TK036*	Storage Tank	Vent	5000	gallons	None
Outside Storage Tanks:					
TK420-1T*	Hydrochloric Acid Tank	Scrubber Vent	12000	gallons	Acid Scrubber**
TK434-1T*	Sulfuric Acid Tank		15000	gallons	None

* Emission units marked with an asterisk are insignificant activities as defined by 326 IAC 2-7-1(21)(A)-(C).
** Control devices marked with a double asterisk are voluntary control units and are not required to demonstrate compliance with any regulations.

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

D.4.1 Non-Applicability Determination of Pharmaceutical MACT Standards [40 CFR 63, Subpart GGG]

Except for the T3 rotary vacuum dryer, the emission units associated with the purification operations are not subject to the requirements of 40 CFR 63, Subpart GGG (Pharmaceutical MACT Standards) because these emission units do not process, use, or produce hazardous air pollutant (HAP) emissions in excess of 50 ppmv pursuant to 40 CFR 63.1251 (Process Vent Definition).

D.4.2 Non-Applicability Determination of State VOC Emission Standards [326 IAC 8-5-3, Registration Issued November 8, 1990, and Amendment Issued November 10, 1992]

(a) Except for the T3 rotary vacuum dryer, the emission units associated with the purification operations do not manufacture pharmaceutical products by chemical synthesis. Therefore, except for the T3 rotary vacuum dryer, these emission units are not subject to the requirements of 326 IAC 8-5-3 (VOC Emission Limitations for Synthesized Pharmaceutical Manufacturing Operations).

(b) The T3 rotary vacuum dryer does not dry pharmaceutical products by chemical synthesis with a potential to emit equal to or greater than 15 pounds per day. Therefore, this dryer is not subject to the requirements of 326 IAC 8-5-3.

D.4.3 T3 Rotary Vacuum Dryer Process Vent Standard [40 CFR 63.1254(A)(2)]

Pursuant to 40 CFR 63 Subpart GGG (Pharmaceutical MACT Standard), undiluted and uncontrolled process vent streams equal to or greater than 50 ppmv HAP from the T3 rotary vacuum dryer shall be limited to an annual mass limit of 900 kilograms (kg) per 365-day period to comply with the individual process-based mass limit standards under 40 CFR 63.1254(a)(2)(i). The sum of process vent emissions from all uncontrolled processes generated during the manufacturing of pharmaceutical products shall not exceed an annual mass limit of 1800 kg HAP per 365-day period pursuant to 40 CFR 63.1254(a)(2)(ii).

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is not required for any of the facilities or control devices described in this Section.

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

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

No emissions testing is required for the emission units described in this Section at this time, but IDEM may require compliance 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 – Performance Testing.

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

D.4.6 Record Keeping Requirements [40 CFR 63.1254(a)(2), 40 CFR 60.116b(b), Registration Issued November 8, 1990, and Amendment Issued November 10, 1992]

(a) The Permittee shall maintain the following records of the T3 rotary vacuum dryer:

(1) Daily rolling annual total HAP emissions from process vent streams equal to or greater than 50 ppmv from the T3 rotary vacuum dryer;

(2) Number of batches per year for each batch process;

(3) Standard batch uncontrolled and controlled emissions for each process;

(4) Actual uncontrolled and controlled emissions for each nonstandard batch,; and

(5) Record whether each batch operated was considered a standard batch.

(b) Pursuant to 40 CFR 60.116b(b) [New Source Performance Standard for Solvent Storage Tanks], the Permittee shall maintain records of the dimensions and capacity of each storage tank associated with the T147 tank module for the life of the source.

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

D.4.7 Modifications and Construction: Advance Approval of Permit Conditions Requirements

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

SECTION D.5 FERMENTED PRODUCTS – SUPPORT OPERATION 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:

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

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Fermented Products Wastewater Sludge Management Operations:					
T110-TKA	Bio-solids Storage Tank	T110	300,000	gallons	T110 Iron Sponge Reactor
T110-TKB	Bio-solids Storage Tank	T110	300,000	gallons	T110 Iron Sponge Reactor
T110-TKC	Bio-solids Storage Tank	T110	300,000	gallons	T110 Iron Sponge Reactor
T110-TKD	Bio-solids Storage Tank	T110	300,000	gallons	T110 Iron Sponge Reactor

(b) The following emission units are not subject to applicable requirements described in this D section:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
Fermented Products Wastewater Treatment (100 Series Tanks):					
T174*	Thermal Research Incinerator	T174	17	MMBtu/hr	N/A
T10-TK101	Aeration Tank*	T174	110,000	gallons	None
T10-TK102	Aeration Tank*	T174	123,000	gallons	None
T10-TK103	Aeration Tank*	T174	123,000	gallons	None
T10-TK104	Aeration Tank*	T174	123,000	gallons	None
T10-TK120	Aeration Tank	T174	270,000	gallons	T174** Incinerator
T10-TK121	Clarifier*	T174	122,000	gallons	
T10-TK122	Clarifier*	T174	122,000	gallons	
T10-TK123	Lift Station*	T174	27,000	gallons	
T10-TK124	Nitrification Tank*	Atmosphere	1,700,000	gallons	None
T10-TK125	Nitrification Tank*	Atmosphere	1,700,000	gallons	None
T10-TK126	Nitrification Tank*	Atmosphere	1,700,000	gallons	None
T10-TK127	Nitrification Clarifier*	Atmosphere	90,000	gallons	None
T10-TK128	Nitrification Clarifier*	Atmosphere	90,000	gallons	None
T10-TK132	Final Clarifier*	Atmosphere	155,000	gallons	None

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
T10-TK142	Final Clarifier*	Atmosphere	155,000	gallons	None
T79-TK401	Wastewater Tank	Atmosphere	21,588	gallons	None
T79-TK402	Wastewater Tank	Atmosphere	21,588	gallons	None
Fermented Products Wastewater Sludge Management Operations:					
T42	Centrifuge*	T174	300	gal/min	T174 Incinerator**
T42-A	Sludge Centrifuge*	T174	100	gal/min	
T42-B	Sludge Centrifuge*	T174	150	gal/min	

* Emission units marked with an asterisk are insignificant activities as defined by 326 IAC 2-7-1(21)(A)-(C).
** Control devices marked with a double asterisk are voluntary units and are not required to demonstrate compliance with any applicable regulations.

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

D.5.1 Non-Applicability Determination of Pharmaceutical MACT Standards [40 CFR 63, Subpart GGG]

The fermented products support operations are not subject to the requirements of 40 CFR 63, Subpart GGG (Pharmaceutical MACT Standards) because:

(a) The emission units associated with the fermented products wastewater sludge management operations do not process, use, or produce hazardous air pollutant (HAP) emissions in excess of 50 ppmv pursuant to 40 CFR 63.1251 (Process Vent Definition); and

(b) The wastewater associated with the fermented products wastewater treatment plant do not contain HAP emissions in excess of 5 ppmw pursuant to 40 CFR 63.1251 (Wastewater Stream Definition).

D.5.2 Non-Applicability Determination of State VOC Emission Standards [326 IAC 8-5-3]

The emission units associated with the fermented products support operations do not manufacture pharmaceutical products by chemical synthesis. Therefore, these emission units are not subject to the requirements of 326 IAC 8-5-3 (VOC Emission Limitations for Synthesized Pharmaceutical Manufacturing Operations).

D.5.3 Emission Limitations and Standards [326 IAC 2-2, CP 157-4363 Issued August 28, 1996, and Amendment 157-8953 Issued November 12, 1997 (Revised by this permit)]

To avoid the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), the Permittee shall comply with the following:

(a) The total reduced sulfur (TRS) emissions from the iron sponge reactor shall not equal or exceed 2.28 pounds per hour, which is equivalent to 762 micrograms per liter (ug/l). This emission limitation also satisfies the emission limitations for reduced sulfur compounds and hydrogen sulfide; and

(b) TRS, reduced sulfur compounds and hydrogen sulfide emissions from the transfer of bio-solids from the storage tanks to trucks shall be controlled by a vapor balance system that exhausts to the iron sponge reactor.

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the iron sponge reactor system.

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

D.5.5 Sampling and Analysis Requirements [CP 157-4363 Issued August 28, 1996 (Revised by this permit), and Amendment 157-8953 Issued November 12, 1997 (Revised by this permit)]

The Permittee shall measure and record the TRS outlet concentration of the air stream to the atmosphere once per calendar week using the sampling protocol and analysis methods most recently approved by IDEM.

D.5.6 Monitoring Requirements [CP 157-4363 Issued August 28, 1996 (Revised by this permit), and Amendment 157-8953 Issued November 12, 1997 (Revised by this permit)]

The Permittee shall monitor and record the pressure drop across the iron sponge reactor annubar once per day. Unless operated under conditions for which the Compliance Response Plan (CRP) specifies otherwise, the pressure drop across the operating reactor shall be maintained within the range of 0.2 and 2 inches of water column. The CRP for the iron sponge reactor system shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above-mentioned range for any one reading.

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

D.5.7 Record Keeping Requirements [CP 157-4363 Issued August 28, 1996 (Revised by this permit), and Amendment 157-8953 Issued November 12, 1997 (Revised by this permit)]

(a) The Permittee shall maintain the following records:

(1) daily pressure drop readings across the iron sponge reactor annubar; and

(2) weekly analysis of the TRS outlet concentration from the iron sponge reactor.

(b) Pursuant to 40 CFR 60.116b(b), Subpart Kb (New Source Performance Standard for Volatile Organic Liquid Storage Vessels) and CP157-4363, issued August 28, 1996, the Permittee shall keep readily accessible records of the dimensions and capacity for each bio-solids storage tank. These records shall be kept for the life of the source.

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

D.5.8 Modifications and Construction: Advance Approval of Permit Conditions Requirements

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

SECTION D.6 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:

(a) The emission units listed below are subject to applicable requirements described or referred to in this D section. The emission units in the BPM production operations can be generally described as process vessels (tanks), crystallizers, filters, centrifuges, dryers, process scrubber systems, and process condenser systems and are referred to as process vents under the National Emission Standards of Hazardous Air Pollutants for Pharmaceutical Production Operations (Pharmaceutical MACT) found at 40 CFR Part 63, Subpart GGG.

General activities such as open manway operations, charging a liquid from a drum to a tank, centrifuge emptying operations, drum filling operations, or loading wetcake into driers are also defined as process vents. Individual identification of these activities are not listed in the description tables given they are not stationary or continually change. Each of these activity types will follow the compliance requirements outlined in this permit section.

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

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
Building T27:				
T27-TK30-1	Process Tank	RTO	200 gal	RTO
T27-TK30-2	Process Tank	RTO	200 gal	RTO
T27-TK31-1	Process Tank	RTO	1000 gal	RTO
T27-TK31-2	Process Tank	RTO	1000 gal	RTO
T27-TK31-3	Process Tank	RTO	1000 gal	RTO
T27-TK31-4	Process Tank	RTO	1000 gal	RTO
T27-TK31-5	Process Tank	RTO	1000 gal	RTO
T27-TK32-1	Process Tank	RTO	1000 gal	RTO
T27-TK32-2	Process Tank	RTO	1000 gal	RTO
T27-TK32-3	Process Tank	RTO	1000 gal	RTO
T27-TK32-4	Process Tank	RTO	1000 gal	RTO
T27-TK32-5	Process Tank	RTO	1000 gal	RTO
T27-TK32-6	Process Tank	RTO	1000 gal	RTO
T27-TK32-7	Process Tank	RTO	350 gal	RTO
T27-TK33-1	Process Tank	RTO	2000 gal	RTO
T27-TK33-2	Process Tank	RTO	2000 gal	RTO
T27-TK33-3	Process Tank	RTO	2000 gal	RTO
T27-TK33-4	Process Tank	RTO	2000 gal	RTO
T27-TK33-5	Process Tank	RTO	500 gal	RTO
T27-TK33-6	Process Tank	RTO	1000 gal	RTO
T27-TK34-1	Process Tank	RTO	750 gal	RTO
T27-TK34-2	Process Tank	RTO	750 gal	RTO
T27-TK34-4	Process Tank	RTO	750 gal	RTO
T27-TK34-5	Process Tank	RTO	750 gal	RTO
T27-TK34-6	Process Tank	RTO	750 gal	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T27-TK34-7	Process Tank	RTO	1000 gal	RTO
T27-TK34-8	Process Tank	RTO	350 gal	RTO
T27-TK35-1	Process Tank	RTO	2000 gal	RTO
T27-TK35-2	Process Tank	RTO	2000 gal	RTO
T27-TK35-3	Process Tank	RTO	2000 gal	RTO
T27-TK35-4	Process Tank	RTO	2000 gal	RTO
T27-TK35-5	Process Tank	RTO	500 gal	RTO
T27-TK35-6	Process Tank	RTO	2000 gal	RTO
T27-TK35-10B	Process Tank	RTO	1000 gal	RTO
T27-TK36-1	Process Tank	RTO	2000 gal	RTO
T27-TK36-2	Process Tank	RTO	1000 gal	RTO
T27-TK36-3	Process Tank	RTO	2000 gal	RTO
T27-TK36-6	Process Tank	RTO	2000 gal	RTO
T27-TK36-7	Process Tank	RTO	500 gal	RTO
T27-TK37-2A	Process Tank	RTO	300 gal	RTO
T27-TK38-3	Process Tank	RTO	1000 gal	RTO
T27-TK40-1	Process Tank	RTO	2000 gal	RTO
T27-TK40-2	Process Tank	RTO	2000 gal	RTO
T27-TK40-4	Process Tank	RTO	1000 gal	RTO
T27-TK40-5	Process Tank	RTO	1500 gal	RTO
T27-TK40-6	Process Tank	RTO	2000 gal	RTO
T27-TK40-6A	Process Tank	RTO	2000 gal	RTO
T27-TK40-7	Process Tank	RTO	2000 gal	RTO
T27-TK40-7A	Process Tank	RTO	2000 gal	RTO
T27-TK40-8	Process Tank	RTO	2000 gal	RTO
T27-TK40-9	Process Tank	RTO	1000 gal	RTO
T27-TK40-10	Process Tank	RTO	1000 gal	RTO
T27-TK40-11	Process Tank	RTO	1000 gal	RTO
T27-TK40-13	Process Tank	RTO	750 gal	RTO
T27-TK40-14	Process Tank	RTO	300 gal	RTO
T27-TK40-31	Process Tank	RTO	500 gal	RTO
T27-TK41-1	Process Tank	RTO	750 gal	RTO
T27-TK41-3	Process Tank	RTO	500 gal	RTO
T27-TK41-4	Process Tank	RTO	500 gal	RTO
T27-TK41-5	Process Tank	RTO	1000 gal	RTO
T27-TK41-6	Process Tank	RTO	300 gal	RTO
T27-TK42-3	Process Tank	RTO	500 gal	RTO
T27-TK42-5	Process Tank	RTO	1000 gal	RTO
T27-TK43-1	Process Tank	RTO	750 gal	RTO
T27-TK43-2	Process Tank	RTO	500 gal	RTO
T27-TK44-1	Process Tank	RTO	2000 gal	RTO
T27-TK44-4	Process Tank	RTO	2000 gal	RTO
T27-TK45-2	Process Tank	RTO	1000 gal	RTO
T27-TK45-3	Process Tank	RTO	1000 gal	RTO
T27-TK46-1	Process Tank	RTO	1000 gal	RTO
T27-TK46-5	Process Tank	RTO	1000 gal	RTO
T27-TK47-1	Process Tank	RTO	1000 gal	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T27-TK47-2	Process Tank	RTO	550 gal	RTO
T27-TK47-3	Process Tank	RTO	1000 gal	RTO
T27-TK47-5	Process Tank	RTO	300 gal	RTO
T27-TK48-1	Process Tank	RTO	300 gal	RTO
T27-TK48-1A	Process Tank	RTO	1000 gal	RTO
T27-TK48-2A	Process Tank	RTO	100 gal	RTO
T27-TK48-3A	Process Tank	RTO	500 gal	RTO
T27-TK49-1	Process Tank	RTO	200 gal	RTO
T27-TK50-1	Process Tank	RTO	650 gal	RTO
T27-TK50-2	Process Tank	RTO	150 gal	RTO
T27-TK50-3	Process Tank	RTO	150 gal	RTO
T27-TK50-4	Process Tank	RTO	500 gal	RTO
T27-TK372-A	Process Tank	RTO	500 gal	RTO
T27-CENT9	Centrifuge	RTO	NA	RTO
T27-CENT16	Centrifuge	RTO	NA	RTO
T27-CENT19	Centrifuge	RTO	NA	RTO
T27-CENT30	Centrifuge	RTO	NA	RTO
T27-CENT37	Centrifuge	RTO	NA	RTO
T27-CENT38	Centrifuge	RTO	NA	RTO
T27-CENT40	Centrifuge	RTO	NA	RTO
T27-DT46-1	Process Tank	RTO		RTO
T27-RVD53-1	Process Dryer	RTO	NA	RTO
T27-RVD53-2	Process Dryer	RTO	NA	RTO
T27-SCR30-4	Process Scrubber	RTO	NA	RTO
T27-SCR33-7	Process Scrubber	RTO	NA	RTO
T27-SCR34-9	Process Scrubber	RTO	NA	RTO
T27-SCR35-10A	Process Scrubber	RTO	NA	RTO
T27-SCR35-10B	Process Scrubber	RTO	NA	RTO
T27-VC31-1	Process Condenser	RTO	NA	RTO
T27-VC32-1	Process Condenser	RTO	NA	RTO
T27-VC32-2	Process Condenser	RTO	NA	RTO
T27-VC32-3	Process Condenser	RTO	NA	RTO
T27-VC33-1	Process Condenser	RTO	NA	RTO
T27-VC33-2	Process Condenser	RTO	NA	RTO
T27-VC33-3	Process Condenser	RTO	NA	RTO
T27-VC33-4	Process Condenser	RTO	NA	RTO
T27-VC35-1	Process Condenser	RTO	NA	RTO
T27-VC35-2	Process Condenser	RTO	NA	RTO
T27-VC35-4	Process Condenser	RTO	NA	RTO
T27-VC36-1	Process Condenser	RTO	NA	RTO
T27-VC36-2	Process Condenser	RTO	NA	RTO
T27-VC36-3	Process Condenser	RTO	NA	RTO
T27-VC40	Process Condenser	RTO	NA	RTO
T27-VC40-2	Process Condenser	RTO	NA	RTO
T27-VC40-5	Process Condenser	RTO	NA	RTO
T27-VC40-7A	Process Condenser	RTO	NA	RTO
T27-VC43-1	Process Condenser	RTO	NA	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T27-VC44-4	Process Condenser	RTO	NA	RTO
T27-VC45-2	Process Condenser	RTO	NA	RTO
T27-VC46-1	Process Condenser	RTO	NA	RTO
T27-VC47-1	Process Condenser	RTO	NA	RTO
T27-VC48-1	Process Condenser	RTO	NA	RTO
T27-VC48-1A	Process Condenser	RTO	NA	RTO
T27-VC49-1	Process Condenser	RTO	NA	RTO
T27-VC50-1	Process Condenser	RTO	NA	RTO
T27-VC53-1	Process Condenser	RTO	NA	RTO
T27-VC53-2	Process Condenser	RTO	NA	RTO
T27-VC53-10	Process Condenser	RTO	NA	RTO
T27-PORTVC	Portable Process Condenser	RTO	NA	RTO
Building T28:				
T28-CENT1	Heinkel Centrifuge	RTO	NA	RTO
T28-CENT2	Heinkel Centrifuge	RTO	NA	RTO
T28-CENT3	Heinkel Centrifuge	RTO	NA	RTO
T28-CENT15	Centrifuge	RTO	NA	RTO
T28-CENT22	Centrifuge	RTO	NA	RTO
T28-CENT24	Centrifuge	RTO	NA	RTO
T28-CENT26	Centrifuge	RTO	NA	RTO
T28-TK28-1	Process Tank	RTO	2000 gal	RTO
T28-TK28-1A	Process Tank	RTO	300 gal	RTO
T28-TK28-2	Process Tank	RTO	1000 gal	RTO
T28-TK28-3	Process Tank	RTO	2000 gal	RTO
T28-TK28-3A	Process Tank	RTO	340 gal	RTO
T28-TK28-03	Process Tank	RTO	2000 gal	RTO
T28-TK28-4	Process Tank	RTO	1000 gal	RTO
T28-TK28-5	Process Tank	RTO	1000 gal	RTO
T28-TK28-6	Process Tank	RTO	1000 gal	RTO
T28-TK28-7	Process Tank	RTO	2000 gal	RTO
T28-TK28-8	Process Tank	RTO	2000 gal	RTO
T28-TK28-9	Process Tank	RTO	1000 gal	RTO
T28-TK28-10	Process Tank	RTO	2000 gal	RTO
T28-TK28-10A	Process Tank	RTO	340 gal	RTO
T28-TK28-11	Process Tank	RTO	2000 gal	RTO
T28-TK28-12	Process Tank	RTO	2000 gal	RTO
T28-TK28-13	Process Tank	RTO	2000 gal	RTO
T28-TK28-14	Process Tank	RTO	2000 gal	RTO
T28-TK28-15	Process Tank	RTO	2000 gal	RTO
T28-TK28-16	Process Tank	RTO	2000 gal	RTO
T28-TK28-17	Process Tank	RTO	1000 gal	RTO
T28-TK28-18	Process Tank	RTO	750 gal	RTO
T28-TK28-19	Process Tank	RTO	2000 gal	RTO
T28-TK28-20	Process Tank	RTO	2000 gal	RTO
T28-TK28-21	Process Tank	RTO	2000 gal	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T28-TK28-22	Process Tank	RTO	2000 gal	RTO
T28-TK28-23	Process Tank	RTO	2000 gal	RTO
T28-TK28-24	Process Tank	RTO	2000 gal	RTO
T28-TK28-25	Process Tank	RTO	1500 gal	RTO
T28-TK28-26	Process Tank	RTO	1500 gal	RTO
T28-TK28-27	Process Tank	RTO	140 gal	RTO
T28-TK28-29	Process Tank	RTO	1000 gal	RTO
T28-TK28-30	Process Tank	RTO	500 gal	RTO
T28-TK28-31	Process Tank	RTO	2000 gal	RTO
T28-TK28-32	Process Tank	RTO	2000 gal	RTO
T28-PTK1	Portable Charge Tank	RTO	300 gal	RTO
T28-PTK2	Portable Charge Tank	RTO	300 gal	RTO
T28-PTK3	Portable Charge Tank	RTO	300 gal	RTO
T28-SCR1	Process Scrubber	RTO	NA	RTO
T28-SCR2	Process Scrubber	RTO	NA	RTO
T28-SCR3	Process Scrubber	RTO	NA	RTO
T28-SCR4	Process Scrubber	RTO	NA	RTO
T28-SCR6	Process Scrubber	RTO	NA	RTO
T28-SCRTK1	Scrubber Tank	RTO	300 gal	RTO
T28-SCRTK2	Scrubber Tank	RTO	500 gal	RTO
T28-SCRTK4	Scrubber Tank	RTO	500 gal	RTO
T28-VC28-1	Process Condenser	RTO	NA	RTO
T28-VC28-3	Process Condenser	RTO	NA	RTO
T28-VC28-4	Process Condenser	RTO	NA	RTO
T28-VC28-5	Process Condenser	RTO	NA	RTO
T28-VC28-6	Process Condenser	RTO	NA	RTO
T28-VC28-8	Process Condenser	RTO	NA	RTO
T28-VC28-10	Process Condenser	RTO	NA	RTO
T28-VC28-11	Process Condenser	RTO	NA	RTO
T28-VC28-12	Process Condenser	RTO	NA	RTO
Building T29:				
T29-CENT1401	Heinkel Centrifuge	RTO	70 gal	RTO
T29-CENT2401	Heinkel Centrifuge	RTO	70 gal	RTO
T29-CENT3401	Heinkel Centrifuge	RTO	70 gal	RTO
T29-DRY1501	Cone Dryer	RTO	580 gal	RTO
T29-DRY2402	Filter Dryer	RTO	863 gal	RTO
T29-DRY2502	Filter Dryer	RTO	863 gal	RTO
T29-DRY3501	Cone Dryer	RTO	580 gal	RTO
T29-IBC8201	Process Tank	RTO	100 gal	RTO
T29-IBC8202	Process Tank	RTO	150 gal	RTO
T29-IBC8203	Process Tank	RTO	150 gal	RTO
T29-IBC8204	Process Tank	RTO	150 gal	RTO
T29-IBC8205	Process Tank	RTO	150 gal	RTO
T29-IBC8206	Process Tank	RTO	150 gal	RTO
T29-IBC8207	Process Tank	RTO	150 gal	RTO
T29-IBC8208	Process Tank	RTO	150 gal	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T29-IBC8209	Process Tank	RTO	150 gal	RTO
T29-IBC8210	Process Tank	RTO	150 gal	RTO
T29-IBC8216	Process Tank	RTO	50 gal	RTO
T29-IBC8217	Process Tank	RTO	50 gal	RTO
T29-IBC8251	Process Tank	RTO	150 gal	RTO
T29-IBC8252	Process Tank	RTO	150 gal	RTO
T29-IBC8253	Process Tank	RTO	150 gal	RTO
T29-IBC8254	Process Tank	RTO	150 gal	RTO
T29-IBC8255	Process Tank	RTO	150 gal	RTO
T29-IBC8256	Process Tank	RTO	150 gal	RTO
T29-IBC8257	Process Tank	RTO	150 gal	RTO
T29-IBC8258	Process Tank	RTO	150 gal	RTO
T29-IBC8259	Process Tank	RTO	150 gal	RTO
T29-IBC8380	Process Tank	RTO	50 gal	RTO
T29-IBC8381	Process Tank	RTO	50 gal	RTO
T29-SFH1121	Process Tank	RTO	NA	RTO
T29-SFH3121	Process Tank	RTO	NA	RTO
T29-TK1201	Process Tank	RTO	2000 gal	RTO
T29-TK1202	Process Tank	RTO	2000 gal	RTO
T29-TK1203	Process Tank	RTO	2000 gal	RTO
T29-TK1204	Process Tank	RTO	2000 gal	RTO
T29-TK1205	Process Tank	RTO	2000 gal	RTO
T29-TK2201	Process Tank	RTO	1600 gal	RTO
T29-TK2202	Process Tank	RTO	2000 gal	RTO
T29-TK2203	Process Tank	RTO	2000 gal	RTO
T29-TK2204	Process Tank	RTO	2000 gal	RTO
T29-TK2205	Process Tank	RTO	2000 gal	RTO
T29-TK3201	Process Tank	RTO	2000 gal	RTO
T29-TK3202	Process Tank	RTO	2000 gal	RTO
T29-TK3203	Process Tank	RTO	2000 gal	RTO
T29-TK3204	Process Tank	RTO	2000 gal	RTO
T29-TK3205	Process Tank	RTO	2000 gal	RTO
T29-TK4201	Process Tank	RTO	1600 gal	RTO
T29-TK4203	Process Tank	RTO	2000 gal	RTO
T29-TK7920	Process Tank	RTO	200 gal	RTO
T29-TK7921	Process Tank	RTO	80 gal	RTO
T29-TK8211	Process Tank	RTO	100 gal	RTO
T29-TK8212	Process Tank	RTO	100 gal	RTO
T29-TK8213	Process Tank	RTO	100 gal	RTO
T29-TK8214	Process Tank	RTO	100 gal	RTO
T29-TK8216	Process Tank	RTO	50 gal	RTO
T29-TK8218	Process Tank	RTO	50 gal	RTO
T29-TK8220	Process Tank	RTO	50 gal	RTO
T29-TK8501	Process Tank	RTO	0.75 sf	RTO
T29-HE1201	Process Condenser	RTO	NA	RTO
T29-HE1202	Process Condenser	RTO	NA	RTO
T29-HE1203	Process Condenser	RTO	NA	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T29-HE1204	Process Condenser	RTO	NA	RTO
T29-HE1205	Process Condenser	RTO	NA	RTO
T29-HE2201	Process Condenser	RTO	NA	RTO
T29-HE2202	Process Condenser	RTO	NA	RTO
T29-HE2203	Process Condenser	RTO	NA	RTO
T29-HE2204	Process Condenser	RTO	NA	RTO
T29-HE2205	Process Condenser	RTO	NA	RTO
T29-HE3201	Process Condenser	RTO	NA	RTO
T29-HE3202	Process Condenser	RTO	NA	RTO
T29-HE3203	Process Condenser	RTO	NA	RTO
T29-HE3204	Process Condenser	RTO	NA	RTO
T29-HE3205	Process Condenser	RTO	NA	RTO
T29-HE4201	Process Condenser	RTO	NA	RTO
T29-HE4203	Process Condenser	RTO	NA	RTO
T29-TK1203A	Accumulator Tank	RTO	70 gal	RTO
T29-TK1204A	Accumulator Tank	RTO	70 gal	RTO
T29-TK1401A	Accumulator Tank	RTO	70 gal	RTO
T29-TK2401A	Accumulator Tank	RTO	70 gal	RTO
T29-TK3401A	Accumulator Tank	RTO	70 gal	RTO
T29-TK4201A	Accumulator Tank	RTO	70 gal	RTO
T29-SCR1601	Process Scrubber	RTO	NA	RTO
T29-SCR2601	Process Scrubber	RTO	NA	RTO
T29-SCR3601	Process Scrubber	RTO	NA	RTO
Building T31:				
T31-CENT	Centrifuge	RTO	13 cf	RTO
T31-CENT504	Centrifuge	RTO	13 gal	RTO
T31-FD803	Filter Dryer	RTO	0.6 m^2	RTO
T31-TK601	Process Tank	RTO	500 gal	RTO
T31-TK602	Process Tank	RTO	500 gal	RTO
T31-TK603	Process Tank	RTO	500 gal	RTO
T31-TK604	Process Tank	RTO	500 gal	RTO
T31-TK611	Process Tank	RTO	500 gal	RTO
T31-TK611DT01	Process Tank	RTO	50 gal	RTO
T31-TK612	Process Tank	RTO	500gal	RTO
T31-TK613	Process Tank	RTO	500 gal	RTO
T31-TK614	Process Tank	RTO	500 gal	RTO
T31-TK631	Process Tank	RTO	300 gal	RTO
T31-TK641	Process Tank	RTO	100 gal	RTO
T31-TK643	Process Tank	RTO	100 gal	RTO
T31-HE501	Process Condenser	RTO	N/A	RTO
T31-HE503	Process Condenser	RTO	N/A	RTO
T31-HE511	Process Condenser	RTO	N/A	RTO
T31-HE512	Process Condenser	RTO	N/A	RTO
T31-HE531	Process Condenser	RTO	N/A	RTO
T31-HE541	Process Condenser	RTO	N/A	RTO
T31-SCR-OZ	Process Scrubber (Ozone)	RTO	N/A	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T31-SCR721	Process Scrubber	RTO	200 gal	RTO
Building T31A:				
T31A-CENT981	Centrifuge	RTO	N/A	RTO
T31A-FD861	Filter Dryer	RTO	0.6 m2	RTO
T31A-FD874	Filter Dryer	RTO	0.6 m2	RTO
T31A-RVD881	Dryer	RTO	100 cf	RTO
T31A-RVD891	Dryer	RTO	100 cf	RTO
T31A-DT683	Drowning Tank 001	RTO	NA	RTO
T31A-TK621	Process Tank	RTO	300 gal	RTO
T31A-TK622	Process Tank	RTO	800 gal	RTO
T31A-TK623	Process Tank	RTO	400 gal	RTO
T31A-TK624	Process Tank	RTO	300 gal	RTO
T31A-TK625	Process Tank	RTO	300 gal	RTO
T31A-TK626	Process Tank	RTO	500 gal	RTO
T31A-TK651	Process Tank	RTO	450 gal	RTO
T31A-TK661	Process Tank	RTO	300 gal	RTO
T31A-TK681	Process Tank	RTO	500 gal	RTO
T31A-TK682	Process Tank	RTO	500 gal	RTO
T31A-TK683	Process Tank	RTO	500 gal	RTO
T31A-TK684	Process Tank	RTO	500 gal	RTO
T31A-TK691	Process Tank	RTO	500 gal	RTO
T31A-TK692	Process Tank	RTO	500 gal	RTO
T31A-TK693	Process Tank	RTO	500 gal	RTO
T31A-TK694	Process Tank	RTO	500 gal	RTO
T31A-TK861K	Process Tank	RTO	50 gal	RTO
T31A-HE481	Process Condenser	RTO	N/A	RTO
T31A-HE482	Process Condenser	RTO	N/A	RTO
T31A-HE491	Process Condenser	RTO	N/A	RTO
T31A-HE492	Process Condenser	RTO	N/A	RTO
T31A-HE521	Process Condenser	RTO	N/A	RTO
T31A-HE551	Process Condenser	RTO	N/A	RTO
T31A-HE561	Process Condenser	RTO	N/A	RTO
T31A-HE581	Process Condenser	RTO	N/A	RTO
T31A-HE583	Process Condenser	RTO	N/A	RTO
T31A-HE591	Process Condenser	RTO	N/A	RTO
T31A-HE593	Process Condenser	RTO	N/A	RTO
T31A-HE781	Process Condenser	RTO	N/A	RTO
T31A-HE791	Process Condenser	RTO	N/A	RTO
T31A-SCR261	Process Scrubber	RTO	N/A	RTO
T31A-SCR262	Process Scrubber	RTO	N/A	RTO
T31A-SCR781	Process Scrubber	RTO	200 gal	RTO
T31A-SCR791	Process Scrubber	RTO	500 gal	RTO
T31A-SCRTK781	Process Scrubber Tank	RTO	300 gal	RTO
T31A-SCRTK791	Process Scrubber Tank	RTO	300 gal	RTO
Building T99:				

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T99-CENT	Heinkel Centrifuge	RTO	NA	RTO
T99-PD43	Pan Dryer	RTO	528 gal	RTO
T99-PD44	Pan Dryer	RTO	528 gal	RTO
T99-RVD1	Rotary Vacuum Dryer	RTO	1200 gal	RTO
T99-RVD2	Rotary Vacuum Dryer	RTO	1200 gal	RTO
T99-RVD3	Rotary Vacuum Dryer	RTO	1200 gal	RTO
T99-RVD5	Rotary Vacuum Dryer	RTO	1200 gal	RTO
T99-RVD6	Rotary Vacuum Dryer	RTO	1200 gal	RTO
T99-RVD7	Rotary Vacuum Dryer	RTO	1200 gal	RTO
T99-RVD8	Rotary Vacuum Dryer	RTO	1200 gal	RTO
T99-TK-D41	Process Tank	RTO	300 gal	RTO
T99-TK-D42	Process Tank	RTO	150 gal	RTO
T99-HE43	Process Condenser	RTO	NA	RTO
T99-HE44	Process Condenser	RTO	NA	RTO
Building T100:				
T100-CENT60	Centrifuge	RTO	N/A	RTO
T100-CENT61	Centrifuge	RTO	N/A	RTO
T100-CENT62	Centrifuge	RTO	N/A	RTO
T100-CENT63	Centrifuge	RTO	N/A	RTO
T100-CENT64	Centrifuge	RTO	N/A	RTO
T100-CENT65	Centrifuge	RTO	N/A	RTO
T100-CENT66	Centrifuge	RTO	N/A	RTO
T100-CENT67	Centrifuge	RTO	N/A	RTO
T100-CENT68	Centrifuge	RTO	N/A	RTO
T100-CENT69	Centrifuge	RTO	N/A	RTO
T100-CENT70	Centrifuge	RTO	N/A	RTO
T100-TK1	Process Tank	RTO	2000 gal	RTO
T100-TK1C	Process Tank	RTO	N/A	RTO
T100-TK2	Process Tank	RTO	4000 gal	RTO
T100-TK3	Process Tank	RTO	2000 gal	RTO
T100-TK4	Process Tank	RTO	2000 gal	RTO
T100-TK5	Process Tank	RTO	2000 gal	RTO
T100-TK6	Process Tank	RTO	2000 gal	RTO
T100-TK7	Process Tank	RTO	4000 gal	RTO
T100-TK8	Process Tank	RTO	4000 gal	RTO
T100-TK8C	Process Tank	RTO	30 gal	RTO
T100-TK9	Process Tank	RTO	4000 gal	RTO
T100-TK10	Process Tank	RTO	4000 gal	RTO
T100-TK11	Process Tank	RTO	4000 gal	RTO
T100-TK12	Process Tank	RTO	4000 gal	RTO
T100-TK13	Process Tank	RTO	3300 Gal	RTO
T100-TK14	Process Tank	RTO	4000 gal	RTO
T100-TK15	Process Tank	RTO	2000 gal	RTO
T100-TK16	Process Tank	RTO	2000 gal	RTO
T100-TK17	Process Tank	RTO	2000 gal	RTO
T100-TK18	Process Tank	RTO	2000 gal	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T100-TK20	Process Tank	RTO	4000 gal	RTO
T100-TK21	Process Tank	RTO	4000 gal	RTO
T100-TK22	Process Tank	RTO	2000 gal	RTO
T100-TK24	Process Tank	RTO	4000 gal	RTO
T100-TK25	Process Tank	RTO	4000 gal	RTO
T100-TK26	Process Tank	RTO	4000 gal	RTO
T100-TK27	Process Tank	RTO	4000 gal	RTO
T100-TK28	Process Tank	RTO	4000 gal	RTO
T100-TK29	Process Tank	RTO	4000 gal	RTO
T100-TK30	Process Tank	RTO	4000 gal	RTO
T100-TK-30A	Process Tank	RTO	70 gal	RTO
T100-TK31	Process Tank	RTO	4000 gal	RTO
T100-TK31B	Process Tank	RTO	50 gal	RTO
T100-TK32	Process Tank	RTO	4000 gal	RTO
T100-TK33	Process Tank	RTO	1000 gal	RTO
T100-TK34	Process Tank	RTO	1000 gal	RTO
T100-TK35	Process Tank	RTO	1000 gal	RTO
T100-TK36	Process Tank	RTO	1000 gal	RTO
T100-TK37	Process Tank	RTO	1000 gal	RTO
T100-TK38	Process Tank	RTO	1000 gal	RTO
T100	Portable Process Tank	RTO	N/A	RTO
T100	Portable Process Tank	RTO	N/A	RTO
T100-PTK1	Portable Cleaning Tank	RTO	150 gal	RTO
T100-HE1	Process Condenser	RTO	N/A	RTO
T100-HE1C	Process Condenser		N/A	
T100-HE2	Process Condenser	RTO	N/A	RTO
T100-HE4	Process Condenser	RTO	N/A	RTO
T100-HE6	Process Condenser	RTO	N/A	RTO
T100-HE7	Process Condenser	RTO	N/A	RTO
T100-HE8	Process Condenser	RTO	N/A	RTO
T100-HE11	Process Condenser	RTO	N/A	RTO
T100-HE12	Process Condenser	RTO	N/A	RTO
T100-HE13	Process Condenser	RTO	N/A	RTO
T100-HE14	Process Condenser	RTO	N/A	RTO
T100-HE14B	Process Condenser	RTO	N/A	RTO
T100-HE16	Process Condenser	RTO	N/A	RTO
T100-HE21A	Process Condenser	RTO	N/A	RTO
T100-HE21B	Process Condenser	RTO	N/A	RTO
T100-HE26	Process Condenser	RTO	N/A	RTO
T100-HE28	Process Condenser	RTO	N/A	RTO
T100-HE31	Process Condenser	RTO	N/A	RTO
T100-TK14A	Accumulator Tank	RTO	50 gal	RTO
T100-TK21A	Accumulator Tank	RTO	50 gal	RTO
T100-TK39	CIP Tank	RTO	500 gal	RTO
T100-SCR80	Process Scrubber	RTO	N/A	RTO
T100-SCR81	Process Scrubber	RTO	N/A	RTO
T100-SCR82	Process Scrubber	RTO	N/A	RTO

Source ID	Equipment Description	Stack/Vent ID	Nominal Capacity	Control Device
T100-SCR83	Process Scrubber	RTO	N/A	RTO
T100-SCR84	Process Scrubber	RTO	N/A	RTO
T100-SCR85	Process Scrubber	RTO	N/A	RTO
T100-TK82	Scrubber Holding Tank	RTO	1000 gal	RTO
T100-TK83	Scrubber Holding Tank	RTO	1000 gal	RTO
T100-TK84	Scrubber Holding Tank	RTO	1000 gal	RTO
T100-TK85	Scrubber Holding Tank	RTO	1000 gal	RTO

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

D.6.1 Standards for BPM Process Vents [40 CFR 63.1254, 326 IAC 2-2-3, and 326 IAC 8-5-3]

The following streamlined standards for the BPM process operations satisfy the Maximum Achievable Control Technology Standards for Pharmaceutical Production Operations (Pharmaceutical MACT) for process vents [40 CFR 63.1254], Prevention of Significant Deterioration Best Available Control Technology (PSD BACT) requirements [326 IAC 2-2-3] and Reasonably Available Control Technology (RACT) requirements for synthesized pharmaceutical manufacturing operations [326 IAC 8-5-3]:

(a) With the exception of Conditions D.6.1(c) and D.6.2, the Permittee shall route the vapors from each operating BPM process vent containing undiluted and uncontrolled process vent streams equal to or greater than 50 ppmv HAP, 50 ppmv VOC, or 15 pounds per day VOC through a closed-vent system to the RTO control system. The operation, inspection and maintenance requirements for the RTO control system, and its closed-vent system, used to control emissions from these emission units are described in Section D.14 of this permit.

(b) The Permittee shall cover all in-process tanks, having an exposed liquid surface containing VOC greater than 15 pounds per day unless production, sampling, maintenance, or inspection procedures require operator access.

(c) The Permittee is not required to control emissions from BPM process vents in accordance with (a) of this section, if it would result in a safety hazard, as long as the sum of the uncontrolled BPM process vent streams within an individual BPM process does not exceed an annual mass limit of 900 kilograms (2000 pounds) of HAP per 365-day period and the sum of all uncontrolled process vent emissions generated during the manufacturing of pharmaceutical products do not exceed an annual mass limit of 1800 kilograms (4000 pounds) of HAP per 365-day period.

(d) The Permittee shall enclose all centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface, where the liquid contains VOC and exerts a total vapor pressure of 0.5 pounds per square inch or more at 20°C.

D.6.2 Control Strategy for Production Equipment Exhaust Systems [40 CFR 63.1254][326 IAC 8-5-3] [326 IAC 2-2-3]

(a) Pursuant to 40 CFR 63.1254, production equipment exhaust systems containing undiluted and uncontrolled exhaust streams with HAP concentrations greater than fifty (50) ppm, HAP shall be routed to the RTO control system. The operation, inspection, and maintenance requirements for the RTO control system, and it's closed - vent system, used to control emissions from these emission units are described in Section D.14 of this permit.

(b) Pursuant to 326 IAC 8-5-3(b)(2), VOC emissions from production equipment exhaust systems shall not exceed thirty-three (33) pounds per day. If uncontrolled VOC emissions from a production equipment exhaust system would exceed thirty three (33) pounds per day, then the Permittee shall route VOC emissions from that production equipment exhaust system to the RTO control system. The operation, inspection, and maintenance requirements for the RTO control system, and its closed vent system, used to control emissions from these emission units are described in Section D.14 of this permit.

(c) Pursuant to 326 IAC 2-2-3, VOC BACT for production equipment exhaust systems not meeting the criteria of D.6.2(a) or D.6.2(b) is no controls. If the process affiliated with a production equipment exhaust system that is not routed to the RTO control system is modified in a manner that causes the criteria in Condition D.6.2(a) or D.6.2(b) to apply, the Permittee shall connect the production equipment exhaust system to the RTO control system before beginning any operations that would cause D.6.2(a) or D.6.2(b) to be applicable.

D.6.3 Leak Detection and Repair (LDAR) Standards [326 IAC 2-2-3, 326 IAC 8-5-3, and 40 CFR 63.1255]

The LDAR standards that apply to components associated with the BPM production operations are described in Sections E.1 and E.2 of this permit.

D.6.4 Heat Exchange System Requirements [326 IAC 2-2-3 and 40 CFR 63.1252(c)(2)]

(a) The Permittee shall inspect the physical integrity of heat exchange systems that use water to cool process equipment or materials used in pharmaceutical manufacturing operations in accordance with the following current good manufacturing practice (CGMP) requirements of 21 CFR 211 to satisfy the streamlined standards of the Pharmaceutical MACT for heat exchange systems [40 CFR 63.1252(c)(2)] and the PSD BACT requirements [326 IAC 2-2-3]:

(1) Assignment of responsibility for maintaining equipment;

(2) Maintenance schedules; and

(3) Description in sufficient detail of the methods, equipment, and materials used in maintenance operations, and the methods of disassembling and reassembling equipment as necessary to assure proper maintenance.

D.6.5 Startup, Shutdown and Malfunction Requirements [326 IAC 2-2-3, 40 CFR 63.1259(a)(3), and 40 CFR 63.6(e) and 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)], 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.14 of this permit.

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

D.6.6 Requirements

The requirements for the RTO control system, and its associated closed-vent system, used to control emissions from the emission units listed in this section are described in Section D.14 of this permit.

D.6.7 Monitoring Requirements

The monitoring requirements for the RTO control system, and its associated closed-vent system, used to control emissions from the applicable emission units listed in this section are described in Section D.14 of this permit.

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

D.6.8 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

(1) RTO Control System Records - The record keeping and reporting requirements for the RTO control system, and associated closed-vent systems, used to control emissions from the emission units listed in this section are described in Section D.14 of this permit.

(2) Process Records - The Permittee shall maintain the following records if the 98% Control Efficiency Emission Standard is used to demonstrate compliance with the requirements of the Pharmaceutical MACT (40 CFR Part 63, Subpart GGG):

(A) Daily rolling annual total HAP emissions;

(B) Number of batches per year for each batch process;

(C) Standard batch uncontrolled and controlled emissions for each process;

(D) Actual uncontrolled and controlled emissions for each nonstandard batch; and

(E) Record whether each batch operated was considered a standard batch.

(3) Heat Exchange System Records - Maintenance records, including the date, time, and sign off or initials of the individual who completed the task, of all heat exchange systems that use water to cool process equipment or materials used in pharmaceutical manufacturing operations. 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).

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

(5) 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 is consistent with the procedures in the SSM Plan.

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

(b) Periodic Reporting Requirements

(1) The following streamlined quarterly reporting requirements shall satisfy the Pharmaceutical MACT standards [40 CFR 63.1256(b)] and the PSD BACT requirements [326 IAC 2-1.1-11]:

(A) SSM summary reports for the processes.

(B) The reporting requirements for the RTO control system, and associated closed-vent system, that controls emissions from the emission units listed in this section are described in Section D.14 of this permit.

(C) The reporting requirements for the LDAR standards are described in Sections E.1 and E.2 of this permit.

(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)], 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, 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 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.6.9 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.

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SECTION D.7 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:

(a) The emission units listed below are subject to applicable requirements described or referred to in this D section. The BPM solvent recovery emission units can be generally described as columns, stills, evaporators, accumulators, process condensers and receivers and are referred to as process vents under the National Emission Standards of Hazardous Air Pollutants for Pharmaceutical Production Operations (Pharmaceutical MACT) found at 40 CFR 63, Subpart GGG and OSW MACT found at 40 CFR 63, Subpart DD. The solvent recovery columns may also be defined as treatment units under the OSW MACT.

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 T19:				
T19-STL1	Still	T79	1500 gal	T79
T19-STL2	Still	T79	4000 gal	T79
T19-COL3	Column	T79	NA	T79
T19-REC1	Receiver	T79	2000 gal	T79
T19-REC10	Receiver	T79	2000 gal	T79
T19-REC11	Receiver	T79	5300 gal	T79
T19-REC2	Receiver	T79	2000 gal	T79
T19-REC3	Receiver	T79	2000 gal	T79
T19-REC6	Receiver	T79 or RTO*	500 gal	T79 or RTO*
T19-REC7	Receiver	T79 or RTO*	500 gal	T79 or RTO*
T19-REC8	Receiver	T79 or RTO*	500 gal	T79 or RTO*
T19-REC9	Receiver	T79	500 gal	T79
Building T52:				
T52-REC52-3	Receiver	T79	2000 gal	T79
T52-REC52-4	Receiver	T79	2000 gal	T79
T52-REC52-1	Stainless Receiver	T79 or RTO*	2000 gal	T79 or RTO*
T52-REC52-11	Receiver	T79 or RTO*	4000 gal	T79 or RTO*
T52-REC52-12	Receiver	T79 or RTO*	4000 gal	T79 or RTO*
T52-REC52-13	Receiver	T79 or RTO*	4000 gal	T79 or RTO*
T52-REC52-2	Stainless Receiver	T79 or RTO*	2000 gal	T79 or RTO*
T52-ACC10	Accumulator	T79 or RTO*	NA	T79 or RTO*
T52-ACC5	Accumulator	T79 or RTO*	NA	T79 or RTO*
T52-ACC6	Accumulator	T79 or RTO*	NA	T79 or RTO*
T52-COL52-8	Wash Column	T79 or RTO*	NA	T79 or RTO*
T52-EVAP10	Evaporator	T79 or RTO*	2000 gal	T79 or RTO*
T52-EVAP5	Evaporator	T79 or RTO*	2000 gal	T79 or RTO*
T52-EVAP6	Evaporator	T79 or RTO*	2000 gal	T79 or RTO*
T52-STPR52-14	Steam Stripper	T79 or RTO*	250 gal	T79 or RTO*
T52-ACC14	Accumulator	T79 or RTO*	NA	T79 or RTO*
Building T61:				
T61-COL61-1	Column	T79	NA	T79

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
T61-COL61-2	Column	T79	NA	T79
T61-COL61-3	Column	T79	NA	T79
T61-REC1	Receiver	T79	5000 gal	T79
T61-REC2	Receiver	T79	5000 gal	T79
T61-REC3	Receiver	T79	5000 gal	T79
T61-REC4	Receiver	T79	5000 gal	T79
T61-REC5	Receiver	T79	5000 gal	T79
T61-REC6	Receiver	T79	5000 gal	T79
T61-REC7	Receiver	T79	5000 gal	T79
T61-REC8	Receiver	T79	5000 gal	T79

* This equipment is currently not in service; however, this equipment shall be tied into either the RTO control system or the T79 control system upon startup.

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

D.7.1 Standards for BPM Support Process Vents [40 CFR 63.1254, CFR 63.690, 326 IAC 2-2-3, and 326 IAC 8-5-3]

The following streamlined standards for the BPM solvent recovery operations satisfy the Pharmaceutical MACT Standards for process vents [40 CFR 63.1254], OSWRO MACT Standards for process vents [40 CFR 63.690], PSD BACT requirements [326 IAC 2-2-3] and RACT requirements for synthesized pharmaceutical manufacturing operations [326 IAC 8-5-3]:

(a) The Permittee shall route the vapors from each operating BPM process vent containing undiluted and uncontrolled process vent streams equal to or greater than 50 ppmv VOHAP and/or 50 ppmv VOC through a closed-vent system to either the RTO control system or T79 fume incinerator control system. The operation, inspection and maintenance requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems, used to control emissions from these emission units are described in Sections D.14 and D.15 of this permit, respectively.

(b) The Permittee shall cover all in-process tanks associated with the BPM solvent recovery operations, having an exposed liquid surface containing VOC greater than 15 pounds per day unless production sampling, maintenance, or inspection procedures require operator access.

(c) The Permittee is not required to control emissions from BPM Support process vents in accordance with (a) of this section, if it would result in a safety hazard, as long as the sum of the uncontrolled BPM Support process vent streams within an individual BPM process does not exceed an annual mass limit of 900 kilograms (2000 pounds) of HAP per 365-day period and the sum of all uncontrolled process vent emissions generated during the manufacturing of pharmaceutical products do not exceed an annual mass limit of 1800 kilograms (4000 pounds) of HAP per 365-day period.

(d) The Permittee shall enclose all centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface, where the liquid contains VOC and exerts a total vapor pressure of 0.5 pounds per square inch or more at 20°C.

D.7.2 Treatment Unit Requirements [326 IAC 2-2-3 and 40 CFR 63.684]

When a solvent recovery column is used as the final treatment step to treat off-site waste containing VOHAP or VOC equal to or greater than 500 ppmw, the Permittee shall reduce the

VOHAP and VOC concentrations of the off-site material to a level that is less than 500 ppmw to satisfy the requirements of 326 IAC 2-2-3 and 40 CFR 63.684(b).

D.7.3 Leak Detection and Repair (LDAR) for Fugitive Emissions [326 IAC 2-2-3 and 40 CFR 63.1255]

The LDAR standards that apply to components associated with the BPM solvent recovery operations are described in Sections E.1 and E.2 of this permit.

D.7.4 Heat Exchange System Requirements [326 IAC 2-2-3 and 40 CFR 63.1252(c)(2)]

(a) The Permittee shall inspect the physical integrity of heat exchange systems that use water to cool process equipment or materials used in pharmaceutical manufacturing operations in accordance with the following current good manufacturing practice (CGMP) requirements of 21 CFR 211 to satisfy the streamlined standards of the Pharmaceutical MACT for heat exchangers [40 CFR 63.1252(c)(2)] and the PSD BACT requirements [326 IAC 2-2-3]:

(1) Assignment of responsibility for maintaining equipment;

(2) Maintenance schedules; and

(3) Description in sufficient detail of the methods, equipment, and materials used in maintenance operations, and the methods of disassembling and reassembling equipment as necessary to assure proper maintenance - 211.67(b)(3).

D.7.5 Startup, Shutdown and Malfunction Requirements [326 IAC 2-2-3, 40 CFR 63.1259(a)(3), 40 CFR 63.697(b)(3), and 40 CFR 63.6(e)(3) and 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 standards [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 or T79 control system, and associated closed-vent systems, are described in Sections D.14 and D.15 of this permit, respectively.

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

D.7.6 Requirements

(a) The requirements for the RTO control system and T79 control system, and associated closed-vent systems, used to control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

(b) The following streamlined requirements for the solvent recovery columns that treat off-site waste shall satisfy the Offsite Waste MACT standards [40 CFR 63.684(d) and (e)] and the PSD BACT requirements [326 IAC 2-1.1-11]:

(1) An initial and annual demonstration shall be performed within 30 days after first time an owner or operator begins using the treatment process to manage a new off-site material stream equal to or greater than 500 ppmw VOHAP or VOC in accordance with the requirements of either § 63.683(b)(1)(ii) or § 63.683(b)(2)(ii).

(2) The Permittee shall establish solvent recovery column temperature limits for each off-site waste material stream equal to or greater than 500 ppmw VOHAP or VOC. The Permittee shall monitor the temperature as follows:

(A) The Permittee shall install and operate the temperature CMS in accordance with 40 CFR 63.8(c).

(B) Each CMS shall be in continuous operation when the solvent recovery column is receiving off-site waste streams equal to or greater than 500 ppmw VOHAP or VOC, except for system malfunctions (breakdowns, out of control periods, and associated repairs), maintenance periods, calibration checks and zero (low-level) and high-level calibration drift adjustments.

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

D.7.7 Monitoring Requirements

The monitoring requirements for the RTO control system and T79 control system, and associated closed-vent systems, used to control emissions from the applicable emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

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

D.7.8 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

(1) RTO Control System and T79 Control System Records - The record keeping requirements for the RTO control system and T79 control system, and associated closed-vent systems, used to control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

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

(3) Process Records – The Permittee shall maintain the following records:

(A) Daily rolling annual total HAP emissions;

(B) Number of batches per year for each batch process;

(C) Standard batch uncontrolled and controlled emissions for each process;

(D) Actual uncontrolled and controlled emissions for each nonstandard batch; and

(E) Record whether each batch operated was considered a standard batch.

(4) Solvent Recovery Records – The Permittee shall track how the solvent recovery columns are being utilized in an operating scenario maintained in the On-Site Implementation Log. If a solvent recovery column is used as a treatment column for offsite waste, then the Permittee shall maintain the following records:

(A) Initial and annual demonstration records;

(B) Records of all required CMS data;

(C) Records of each CMS calibration checks;

(D) Maintenance records for each CMS; and

(E) Occurrence/duration records of each CMS malfunction.

(5) Heat Exchange System Records - Maintenance records, including the date, time, and sign off or initials of the individual who completed the task, of all heat exchange systems that use water to cool process equipment or materials used in pharmaceutical manufacturing operations. 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:

(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.

(7) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(b) Periodic Reporting Requirements

(1) The following streamlined quarterly reporting requirements shall satisfy the Pharmaceutical MACT standards [40 CFR 63.1256(b)], Offsite Waste MACT [40 CFR 63.697(b)(3)] and the PSD BACT requirements [326 IAC 2-1.1-11]:

(A) SSM summary reports for the processes.

(B) The reporting requirements for the RTO control system, T79 fume incinerator control system, and associated closed-vent systems that control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

(C) The reporting requirements for the LDAR standards are described in Sections E.1 and E.2 of this permit.

(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, 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 of the event;

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

(D) Report any excess emissions and/or parameter monitoring exceedances 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.7.9 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.8 BPM SUPPORT OPERATIONS – INDIVIDUAL DRAIN SYSTEM 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:

The emission units listed below are subject to applicable requirements described or referred to in this D section. These sumps are defined as individual drain systems under the National Emission Standards of Hazardous Air Pollutants for Pharmaceutical Production Operations (Pharmaceutical MACT) found at 40 CFR 63, Subpart GGG.

Unit ID	Unit Description	Stack/Vent	Nominal Capacity	Control Device
Building T27:				
T27-Sump*	Sump Tank/Lift Station	RTO	2000 gal	RTO
Building T28:				
T28-Sump*	Sump	RTO	1300 gal	RTO
Building T31:				
T31-Sump*	Sump	RTO	5900 gal	RTO
Building T31A:				
T31A-Sump*	Sump	RTO	300 gal	RTO
Building T19:				
T19-1-Sump*	Sump	None		None

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

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

D.8.1 BPM Individual Drain System (IDS) Standards [40 CFR 63.1256(e), 40 CFR 63.689(b), and 326 IAC 2-2-3]

The following streamlined standards for BPM IDSs satisfy the requirements of the Pharmaceutical MACT Standards for individual drain systems [40 CFR 63.1256(e)], OSWRO MACT Standards for transfer systems [40 CFR 63.689(b)], and PSD BACT requirements [326 IAC 2-2-3]:

(a) Definition Standards:

(1) A BPM IDS is defined as any stationary system used to convey waste streams containing HAP or VOC to a waste management unit. A segregated stormwater sewer system, which is a drain and collection system designed and operated for the sole purpose of collecting rainfall-runoff at a facility, and which is segregated from all other individual drain systems, is excluded from this definition. An IDS that is used for the sole purpose of collecting wastewater from drips, spills and leaks, or water from safety showers, condensation and fire deluge systems, is excluded from this definition. For purposes of inspections in Section D.8.1(c), a BPM IDS includes any fixed roof, cover, and/or enclosure, and closed vent system section from the IDS to the inlet of the production building roof fan exhausting to the control device or to the IDS conservation vent.

(b) Operational Standards:

(1) The Permittee shall cover the openings of each operating BPM IDS containing waste equal to or greater than 500 parts per million by weight (ppmw) HAP and/or 500 ppmw VOC at all times during use except when it is necessary to use the opening for sampling or removal of material, or for equipment inspection, maintenance, or repair; and

(2) The Permittee shall route the vapors from each operating BPM IDS containing waste equal to or greater than 500 ppmw HAP and/or 500 ppmw VOC through a closed-vent system to either the RTO control system or T79 fume incinerator control system. The operation, inspection and maintenance requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems, used to control emissions from these emission units are described in Sections D.14 and D.15 of this permit, respectively; or

(3) For each BPM IDS equipped with a water seal, the Permittee is not subject to the requirements in (1) and (2) of this section, but instead shall ensure that the water seal is maintained on a semiannual basis. For example, a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap by a hose could be used to verify flow of water to the trap. Visual observation is also an acceptable alternative.

(c) Inspection Standards:

(1) For each BPM IDS containing waste equal to or greater than 500 ppmw HAP and/or 500 ppmw VOC, the Permittee shall perform the following visual inspections and, when necessary, comply with the following repair requirements:

(A) Initial and semiannual visual inspections of each BPM IDS for improper work practices such as leaving open any access hatch or other opening when such hatch or opening is not in use for sampling or removal, or for equipment inspection, maintenance, or repair.

(B) Initial and semiannual visual inspections of each BPM IDS for control equipment failures such as a cracked or broken joint, lid, cover, or door.

(C) Initiate repair of any leak no later than 5 calendar days after identification, and complete repair within 15 days after identification, except for the following allowances for delay of repair:

(i) Repair is technically infeasible without a shutdown;

(ii) Emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. In such cases, repair shall occur by the end of the next shutdown;

(iii) Equipment is emptied or is no longer used to treat waste equal to or greater than 500 ppmw HAP and/or VOC; or

(iv) Unavailability of parts beyond the control of the Permittee.

(2) For each BPM IDS containing waste equal to or greater than 500 ppmw HAP and/or 500 ppmw VOC and not operated under negative pressure, the Permittee shall perform the following additional inspections and, when necessary, comply with the following repair requirements:

(A) Initial one-time Method 21 inspection on the cover of each BPM IDS. For new equipment, this inspection shall be performed within 150 days upon startup of the new equipment.

(B) Semiannual visual inspections for visible, audible, or olfactory indications of leaks.

(C) Initiate repair of any leak no later than 5 calendar days after identification, and complete repair within 15 days after identification, except for the following situations:

(i) Delay of repair is allowed if the repair is technically infeasible without a shutdown; or

(ii) Delay of repair is allowed if the emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair.

(3) For each BPM IDS equipped with a water seal, the Permittee is not subject to the requirements in (1) and (2) of this section, but instead shall ensure that the water seal is maintained on a semiannual basis. For example, a flow-monitoring device indicating positive flow from a main to a branch water line supplying a trap or water being continuously dripped into the trap by a hose could be used to verify flow of water to the trap. Visual observation is also an acceptable alternative.

(4) BPM IDSs containing waste equal to or greater than 500 ppmw HAP and/or 500 ppmw VOC that are unsafe or difficult to inspect are not subject to the requirements of D.8.1 (b)(2) and D.8.1(c).

D.8.2 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 standards [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 or T79 control system, are described in Sections D.14 and D.15 of this permit, respectively.

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

D.8.3 Requirements

(a) The compliance determination requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems, used to control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

(b) The Permittee shall utilize engineering knowledge of the waste stream constituents such as material balances to demonstrate the average VOHAP and/or VOC concentration is less than 500 ppmw for each BPM IDS that is not controlled in accordance with D.8.3 (a).

D.8.4 Monitoring Requirements

The monitoring requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems, used to control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

Record Keeping and Reporting Requirements [326 IAC 2-7-10.5, 326 IAC 2-7-12 and 326 IAC 2-2]

D.8.5 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

(1) RTO Control System and T79 Control System Records - The record keeping requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems that control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

(2) Inspection and Maintenance Records - The Permittee shall maintain the following records:

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

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

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

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

(E) Information on each BPM IDS cover 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 required 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) Documentation of a decision to use a delay of repair due to unavailability of parts shall include a description of the failure, the reason additional time was necessary (including a statement of why replacement parts were not kept onsite and when delivery from the manufacturer is scheduled), and the date when the repair was completed.

(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 wit the procedures in the SSM Plan.

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

(4) IDS Waste Stream Records - The Permittee shall identify each IDS not controlled by the RTO or T79 control system and maintain documentation to support the average waste stream constituents of VOHAP and/or VOC concentration are less than 500 ppmw.

(b) Periodic Reporting Requirements

(1) The following streamlined quarterly reporting requirements shall satisfy the Pharmaceutical MACT standards [40 CFR 63.1256(b)] and the PSD BACT requirements [326 IAC 2-1.1-11]:

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

(B) SSM summary reports for the processes.

(C) The reporting requirements for the RTO control system, T79 fume incinerator control system, and associated closed-vent systems that control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

(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, 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 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.8.6 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.

Non-Applicability of Requirements

D.8.7 Non-Applicability Determinations [326 IAC 8-5-3]

The control requirements of the Synthesized Pharmaceutical RACT rules (326 IAC 8-5-3) do not apply to the individual drain systems identified above in the Facility Description section because the potential to emit VOC emissions from each facility is less than the rule applicability threshold level of 6.8 kilograms per day (15 pounds per day).

SECTION D.9 BPM SUPPORT OPERATIONS – SOLVENT STORAGE 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
Building T143 – Tank Module:				
T143-TK01	Solvent Tank	T79 Incinerator	38,245 gal	T79 Incinerator
T143-TK03	Solvent Tank	T79 Incinerator	38,245 gal	T79 Incinerator
T143-TK05	Solvent Tank	T79 Incinerator	38,245 gal	T79 Incinerator
T143-TK07	Solvent Tank	T79 Incinerator	38,245 gal	T79 Incinerator
T143-TK09	Solvent Tank	T79 Incinerator	38,245 gal	T79 Incinerator
T143-TK11	Solvent Tank	T79 Incinerator	38,245 gal	T79 Incinerator
T143-TK12	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK13	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK14	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK16	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK17	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK18	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK19	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK20	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK21	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK22	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK23	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK24	Solvent Tank	T79 Incinerator	19,500 gal	T79 Incinerator
Building T145 – Tank Module:				
T145-TK25	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK26	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK27	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK28	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK29	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK30	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK31	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK32	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK33	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK34	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK35	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
T145-TK36	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK37	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK38	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK39	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK40	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK41	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK42	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK43	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK44	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK45	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK46	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK47	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK48	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK49	Solvent Tank	T79 Incinerator	18,900 gal	T79 Incinerator
T145-TK50	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK51	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK52	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK53	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK54	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK55	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK56	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK57	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK58	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
T145-TK59	Solvent Tank	T79 Incinerator	10,000 gal	T79 Incinerator
Building T146 – Tank Module:				
T146-TK01	Solvent Tank	RTO	19,500 gal	RTO
T146-TK02	Solvent Tank	RTO	19,500 gal	RTO
T146-TK03	Solvent Tank	RTO	19,500 gal	RTO
T146-TK04	Solvent Tank	RTO	19,500 gal	RTO
T146-TK05	Solvent Tank	RTO	19,500 gal	RTO
T146-TK06	Solvent Tank	RTO	19,500 gal	RTO
T146-TK07	Solvent Tank	RTO	19,500 gal	RTO
T146-TK08	Solvent Tank	RTO	19,500 gal	RTO
T146-TK09	Solvent Tank	RTO	19,500 gal	RTO
T146-TK10	Solvent Tank	RTO	19,500 gal	RTO
T146-TK13	Solvent Tank	RTO	19,000 gal	RTO
T146-TK14	Solvent Tank	RTO	19,000 gal	RTO

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
T146-TK15	Solvent Tank	RTO	19,000 gal	RTO
T146-TK16	Solvent Tank	RTO	19,000 gal	RTO
T146-TK17	Solvent Tank	RTO	19,000 gal	RTO
T146-TK18	Solvent Tank	RTO	19,000 gal	RTO
T146-TK19	Solvent Tank	RTO	19,000 gal	RTO
T146-TK22	Solvent Tank	RTO	19,000 gal	RTO
Building T64:				
T64-TK2	Phenol Storage Tank	RTO	10,000 gal	RTO

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

D.9.1 Standards for BPM Solvent Storage Tanks [40 CFR 63.1253(c)(1)(i), 40 CFR 60.112b and 60.113b, 326 IAC 8-5-3, and 326 IAC 2-2]

The following streamlined standards for the BPM solvent storage tanks satisfy the requirements of the Pharmaceutical MACT Standards for storage tanks [40 CFR 63.1253(c)(1)(i)], Volatile Organic Liquid Storage Vessel Standards [40 CFR 60.112b and 60.113b], PSD BACT requirements [326 IAC 2-2-3] and RACT requirements for synthesized pharmaceutical manufacturing operations [326 IAC 8-5-3]:

(a) Definition Standards:

(1) A BPM solvent storage tank is defined as any vessel designed to store raw material feedstocks or used solvent to be recovered that contain VOCs and/or VOHAP. Pressure vessels greater than 204.9 kPa without emissions to the atmosphere, vessels attached to motor vehicles, or vessels used to store beverage alcohol are not BPM solvent storage tanks. For purposes of inspections in Section D.9.1(c), a BPM solvent storage tank includes any fixed roof, cover, and/or enclosure, and closed vent system section from the BPM solvent storage tank to the inlet of the production building roof fan exhausting to the control device or to the BPM solvent storage tank conservation vent.

(b) Operational Standards:

(1) The Permittee shall route the vapors from each operating BPM solvent storage tank through a closed-vent system to either the RTO control system or the T79 fume incinerator control system. The operation, inspection and maintenance requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems, used to control emissions from these emission units are described in Sections D.14 and D.15 of this permit, respectively.

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

(c) Inspection Standards:

(1) The Permittee shall conduct one-time Method 21 inspections of the fixed roof for each existing BPM solvent storage tank not operated under negative pressure and not already subject to LDAR within 150 days of the issuance date of this permit, and for each new BPM solvent 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 each BPM solvent storage tank for visible, audible, or olfactory indications of leaks.

(3) The Permittee shall initiate repair of any leak on a BPM solvent storage tank no later than 5 calendar days after identification, and complete the repair 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 or 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.9.2 Exceptions to Standards for BPM Solvent Storage Tanks [40 CFR 63.1253 and 326 IAC 2-2]

(a) The BPM solvent storage tanks are not subject to the standards established in Condition D.9.1 (b) during periods of planned routine maintenance, as long as the planned routine maintenance activities do not exceed 240 hours per 365 day period.

(b) BPM solvent storage tanks storing VOC/VOHAP with a vapor pressure less than 3.5 kPa are not subject to the requirements of D.9.1 (b)(1) and (c).

(c) BPM solvent storage tanks that are unsafe or difficult to inspect are not subject to the requirements of D.9.1(c).

D.9.3 Leak Detection and Repair (LDAR) Standards [40 CFR 63.1255 and 326 IAC 2-2]

The LDAR standards that apply to components associated with the emission units listed in this section are described in Sections E.1 and E.2 of this permit.

D.9.4 Startup, Shutdown and Malfunction Requirements [40 CFR 63.1259(a)(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)], 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 or T79 control system, are described in Sections D.14 and D.15 of this permit, respectively.

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

D.9.5 Requirements

The requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems that control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

D.9.6 Monitoring Requirements

The monitoring requirements for the RTO control system, T79 fume incinerator control system, and associated closed-vent systems that control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

Record Keeping and Reporting Requirements [326 IAC 2-7-10.5, 326 IAC 2-7-12, 326 IAC 2-2, 40 CFR 60.7, 40 CFR 60 Subpart Kb, and 40 CFR 63 Subpart GGG]

D.9.7 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

(1) The record keeping requirements for the RTO control system, T79 fume incinerator control system, and associated closed-vent systems that control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

(2) Inspection and Maintenance Records - The Permittee shall maintain the following records:

(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) Visual inspection log of BPM solvent 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 BPM solvent storage tank, including the date of inspection and a statement that no leaks were detected, if applicable;

(E) Information on each BPM solvent 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 affected without a shutdown;

(vi) Expected date of successful repair of leak if leak not required 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 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:

(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 is 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.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, for the life of the source, 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, 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) Periodic Reporting Requirements

(1) The following streamlined quarterly reporting requirements shall satisfy the Pharmaceutical MACT standards [40 CFR 63.1256(b)] and the PSD BACT requirements [326 IAC 2-1.1-11]:

(A) Semiannual visual inspections conducted during which a leak was detected;

(B) Periods of planned routine maintenance; and

(C) SSM summary reports for the processes.

(D) The reporting requirements for the RTO control system, T79 fume incinerator control system, and associated closed-vent systems that control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

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

(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)] and PSD BACT requirements [326 IAC 2-1.1-11].

(1) Any time an action taken by the Permittee during an SSM event of the process is not consistent with the procedures specified in the SSM Plan, 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 the 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 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.9.8 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 and 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 BPM 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
Building T27:				
T27-TK53-10*	Waste Tank	RTO	500 gal	RTO
Building T28:				
T28-TK-28HW*	Waste Tank	RTO	250 gal	RTO
Building T29:				
T29-TK7902*	Waste Tank	RTO	1000 gal	RTO
Building T31:				
T31-TK609*	Waste Tank	RTO	100 gal	RTO
T31-TK669*	Waste Tank	RTO	100 gal	RTO
Building T31A:				
T31A-TK451K*	Waste Tank	RTO	100 gal	RTO
T31A-TK688*	Waste Tank	RTO	125 gal	RTO
Building T99:				
T99-TK-1B*	Waste Tank	RTO	100 gal	RTO
T99-TK-7B*	Waste Tank	RTO	210 gal	RTO
T99-TK-8B*	Waste Tank	RTO	210 gal	RTO
T99-TK-D45A*	Waste Tank	RTO	100 gal	RTO
Building T100:				
T100-TK-10A*	Waste Tank	RTO	200 gal	RTO
T100-TK-48*	Waste Tank	RTO	3300 gal	RTO
Building T79:				
T79-TK301*	Equalization Tank	T79 - 321 stream	50,000 gal	T79 Incinerator
T79-TK302*	Equalization Tank	T79 - 321 stream	50,000 gal	T79 Incinerator
T79-TK303*	Neutralization Tank	T79 - 321 stream	5,000 gal	T79 Incinerator
Tank Module Building T140:				
T140-TK3122	Waste Tank	T79 Incinerator	38,425 gal	T79 Incinerator
T140-TK3123	Waste Tank	T79 Incinerator	38,425 gal	T79 Incinerator
T140-TK3124	Waste Tank	T79 Incinerator	38,425 gal	T79 Incinerator
T140-TK3125	Waste Tank	T79 Incinerator	38,425 gal	T79 Incinerator
T140-TK3126	Waste Tank	T79 Incinerator	38,425 gal	T79 Incinerator
T140-TK3227*	Waste Tank	T79 -324 stream	18,130 gal	T79 Incinerator
T140-TK3228*	Waste Tank	T79 - 324 stream	18,130 gal	T79 Incinerator
T140-TK3229*	Waste Tank	T79 - 324 stream	500 gal	T79 Incinerator
Tank Module Building T142:				
T142-TK01	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK02	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK03	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
T142-TK04	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK05	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK06	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK07	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK08	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK09	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK10	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK11	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
T142-TK12	Waste Tank	T79 or RTO	19,500 gal	T79 or RTO
Tank Module Building T143:				
T143-TK02*	Waste Tank	T79 - 325 stream	19,500 gal	T79 Incinerator
T143-TK06*	Waste Tank	T79 - 325 stream	19,500 gal	T79 Incinerator
T143-TK08	Waste Tank	T79 Incinerator	19,500 gal	T79 Incinerator
T143-TK10*	Waste Tank	T79 - 325 stream	19,500 gal	T79 Incinerator
T143-TK15*	Waste Tank	T79 - 325 stream	19,500 gal	T79 Incinerator
T143-TK56*	Knock Out Pot	T79 Incinerator	45 gal	T79 Incinerator
Tank Module Building T145:				
T145-TK76*	Knock Out Pot	T79 Incinerator	45 gal	T79 Incinerator
T145-TK77*	Knock Out Pot	T79 Incinerator	45 gal	T79 Incinerator
Tank Module Building T146:				
T146-TK23	Waste Tank	RTO	19,000 gal	RTO
T146-TK24	Waste Tank	RTO	19,000 gal	RTO
T146-TK11*	Waste Tank	RTO	18,644 gal	RTO
T146-TK20*	Waste Tank	RTO	18,644 gal	RTO
T146-TK21*	Waste Tank	RTO	18,644 gal	RTO
T146-TK12	Waste Tank	RTO	19,500 gal	RTO
T146-TK56*	Knock Out Pot	RTO	45 gal	RTO
T48 Tank Farm:				
T48-TK3207*	Waste Tank	T79 - 324 stream	102,759 gal	T79 Incinerator
T48-TK3208*	Waste Tank	T79 - 324 stream	102,759 gal	T79 Incinerator
T48-TK3209*	Waste Tank	T79 - 324 stream	102,759 gal	T79 Incinerator
T48-TK3211*	Waste Tank	T79 - 324 stream	260,650 gal	T79 Incinerator
T48-TK3212*	Waste Tank	T79 - 324 stream	260,650 gal	T79 Incinerator

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

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

D.10.1 Standards for BPM Waste Storage Tanks [40 CFR 63.1256(b), 40 CFR 63.685, 40 CFR 60.110b, 326 IAC 2-2-3, and 326 IAC 8-5-3]

The following streamlined standards for BPM 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], PSD BACT requirements [326 IAC 2-2-3], and RACT requirements for synthesized pharmaceutical manufacturing operations [326 IAC 8-5-3]:

(a) Definition Standards:

(1) A BPM waste storage tank is defined as any waste management unit that is designed to contain an accumulation of 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 BPM waste storage tanks. For purposes of inspections in Section D.10.1(c), BPM waste storage tank includes any fixed roof, cover, and/or enclosure, and closed vent system section from the BPM waste storage tank to the inlet of the production building roof fan exhausting to the control device or to the BPM waste storage tank conservation vent.

(b) Operational Standards:

(1) The Permittee shall route the vapors from each operating BPM waste storage tank through a closed-vent system to either the RTO control system or the T79 fume incinerator control system. The operation, inspection and maintenance requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems, used to control emissions from these emission units are described in Sections D.14 and D.15 of this permit, respectively.

(2) BPM 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 BPM 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 BPM waste storage tank for visible, audible, or olfactory indications of leaks.

(3) The Permittee shall initiate repair of any leak on a BPM 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 or 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.10.2 Exceptions to Standards for BPM Waste Storage Tanks [40 CFR 63.1256(b), 40 CFR 63, and 326 IAC 2-2-3]

(a) The BPM waste storage tanks less than 38 cubic meters are not subject to the standards established in Condition D.10.1 (b) during periods of planned routine maintenance, as long as the planned routine maintenance activities do not exceed 240 hours per 365 day period.

(b) BPM waste storage tanks storing VOC/VOHAP with a vapor pressure less than 3.5 kPa are not subject to the requirements of D.10.1 (b)(1) and (c).

(c) BPM waste storage tanks that are unsafe or difficult to inspect are not subject to the requirements of D.10.1(c).

D.10.3 Leak Detection and Repair (LDAR) Standards [40 CFR 61, Subpart V and 326 IAC 2-2-3]

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

D.10.4 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 or T79 control system, via its associated closed vent system, are described in Sections D.14 and D.15 of this permit, respectively.

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

D.10.5 Requirements

The requirements for the RTO control system and T79 fume incinerator control system, and associated closed-vent systems, used to control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

D.10.6 Monitoring Requirements

The monitoring requirements for the RTO control system and T79 fume incinerator control system used to control emissions from the emission units listed in this section are described in Sections D.14 and D.15 of this permit, respectively.

Record Keeping and Reporting Requirements [326 IAC 2-7-10.5, 326 IAC 2-7-12, 326 IAC 2-2, 40 CFR 60.7, 40 CFR 60 Subpart Kb, 40 CFR 63 Subpart DD, and 40 CFR 63 Subpart GGG]

D.10.7 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

(1) RTO Control System and T79 Control System Records - The record keeping requirements for the RTO control system and T79 fume incinerator control system used to control emissions from these emission units are described in Sections D.14 and D.15 of this permit, respectively.

(2) Inspection and Maintenance Records - The Permittee shall maintain the following records:

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

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

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

(E) Information on each BPM 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 required 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 BPM 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 wit 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 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 BPM 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 63.1256(b)] 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.

(D) The reporting requirements for the RTO control system and T79 fume incinerator control system used to control emissions from these emission units are described in Sections D.14 and D.15 of this permit, respectively.

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

(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, 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 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.10.8 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.11 BPM 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 BPM WASTE CONTAINERS:*				
A small BPM waste container, such as a drum, is defined as 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 compliance requirements outlined in this section.				
LARGE BPM WASTE CONTAINERS:*				
A large BPM waste container, such as tanker or melon, is defined as 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 compliance requirements outlined in this section.				

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

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

D.11.1 Standards for Small BPM Waste Containers [40 CFR 63.1256(d), 40 CFR 63.688, 326 IAC 2-2-3]

The following streamlined standards for small BPM 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 BPM waste container is defined as any portable unit containing VOC/VOHAP material 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 BPM 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 BPM waste container containing VOC/VOHAP shall meet existing Department of Transportation (DOT) specifications and testing requirements under 49 CFR 178.

(c) Inspection Standards:

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

(2) Inspections that are unsafe or difficult to inspect are not subject to the inspection requirements of D.11.1(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) The LDAR standards that apply to the components associated with the emission units listed in this section are described in Section E.2.

D.11.2 Standards for Large BPM Waste Containers [40 CFR 63.1256(d), 40 CFR 63.688, 326 IAC 2-2-3, 326 IAC 2-7-24]

The following standards represent the streamlined requirements of the Pharmaceutical MACT Standards under 40 CFR 63.1256(d), OSWRO MACT Standards under 40 CFR 63.688, and Best Available Control Technology (BACT) requirements under 326 IAC 2-2-3:

(a) Definition Standards:

(1) A large BPM waste container is defined as any portable unit containing VOC/VOHAP material 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 BPM 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 BPM liquid waste into a large BPM 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 BPM 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) Inspections that are unsafe or difficult to inspect are not subject to the inspection requirements of D.11.2(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 2-7-10.5, 326 IAC 2-7-12 and 326 IAC 2-2]

D.11.3 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

(1) The Permittee shall maintain the following records for inspections required by Conditions D.11.1 and D.11.2:

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

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

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

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

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

(i) Instrument identification numbers (for Method 21 inspections only), 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; and

(iii) 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 D.11.3 (a)(5) for each inspection conducted during which a leak was detected in the next quarterly report.

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

D.11.4 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.

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SECTION D.12 T49 LIQUID WASTE INCINERATOR, 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
T49 Liquid Waste Incinerator	T49	T49 Stack	75 MMBtu/hr	Condenser/Absorber; Hydro-SonicTM Scrubber

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 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, and D.12.7 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 T49 liquid waste incinerator shall have a permit issued under 40 CFR 270 whenever off-site waste material is treated and destroyed in the T49 liquid waste incinerator. The incinerator shall operate in accordance with the HWC MACT standards under 40 CFR 63, Subpart EEE.

(c) Pursuant to the HWC MACT standards [40 CFR 63.1206(b)(5)(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), as long as the Permittee complies with the following requirements:

(1) If it is determined that the change may adversely affect compliance with any emission standard, the Permittee shall comply with the requirements specified in 40 CFR 63.1206(b)(5)(i) prior to implementing the change(s).

(2) If it is determined that the change will not adversely affect compliance with the emission standards of this condition, the Permittee may implement the change(s) but must revise as necessary the performance test plan, DOC, NOC, and SSM plan, to reflect the change(s).

D.12.2 Particulate Matter Emission Standards [40 CFR 63.1203 and 40 CFR 52, Subpart P]

(a) In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(7)] and the approved Indiana State Implementation Plan (SIP) applicable to incinerators [40 CFR 52, Subpart P], the particulate matter (PM) emissions from the T49 liquid waste incinerator stack exhaust shall not exceed 34 milligrams per dry standard cubic meter (mg/dscm) (0.015 grains per dry standard cubic feet (gr/dscf)), corrected to 7 percent oxygen.

(b) In order to satisfy the approved SIP applicable to incinerators [40 CFR Part 52, Subpart P], the T49 liquid waste incinerator shall:

(1) Consist of primary and secondary chambers or the equivalent. The design and operation of this incinerator in accordance with the requirements of this section of the permit is equivalent to the design and operation of a primary and secondary chamber,

(2) Be equipped with a primary burner unless burning wood products,

(3) Comply with 326 IAC 5-1 and 326 IAC 2,

(4) Be maintained properly as specified by the manufacturer and approved by the commissioner. The issuance of this permit shall be considered approval by the commissioner,

(5) Be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner. The issuance of this permit shall be considered approval by the commissioner,

(6) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators,

(7) Be operated so that emissions of hazardous material including, but not limited to, viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented,

(8) Not emit particulate matter in excess of three-tenths (0.3) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air, and

(9) Not create a nuisance or a fire hazard.

If any of the above result, the burning shall be terminated immediately.

The terms of Condition D.12.2 (b) will no longer apply upon USEPA approval of the revised requirements of 326 IAC 4-2 (26 Ind. Reg. 1071) into the SIP because the T49 liquid waste incinerator is subject to 40 CFR 63, Subpart EEE.

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 T49 liquid waste incinerator shall be equipped with a caustic scrubber system to control SO_2 emissions. The SO_2 emissions from the incinerator stack exhaust shall not exceed 500 ppmv dry corrected to 7% oxygen, averaged over a 24-hour daily period when burning waste streams. This facility is not subject to emission limitations and standards in 326 IAC 7 because the incinerator does not have the capability to burn fuel oil.

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

In order to satisfy the PSD BACT requirements [326 IAC 2-2-3], the T49 liquid waste incinerator shall implement good combustion practices to control NO_x emissions. The NOx emissions from the incinerator stack exhaust shall not exceed 975 ppmv dry corrected to 7% oxygen, expressed as NO_2, 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 T49 liquid waste incinerator is operating:

(a) Mercury – In order to satisfy the HWC MACT standards [40 CFR 63.1203(a)(2)], the mercury emissions from the T49 liquid waste incinerator stack exhaust shall not exceed 130 ug/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 T49 liquid waste incinerator stack exhaust shall not exceed 240 ug/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 T49 liquid waste incinerator stack exhaust shall not exceed 97 ug/dscm, corrected to 7 percent 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 T49 liquid waste incinerator stack exhaust shall not exceed 77 ppmv dry corrected to 7% oxygen, expressed as HCl equivalent. In order to satisfy the PSD BACT requirements for fluorides [326 IAC 2-2-3], the T49 liquid waste incinerator control system shall achieve an HCl control efficiency of 98% or greater.

(e) Dioxin/Furans – In order to satisfy HWC MACT standards [40 CFR 63.1203(a)(1)], the dioxin/furan emissions from the T49 liquid waste incinerator stack exhaust shall not exceed 0.40 ng TEQ/dscm, corrected to 7 percent oxygen.

(f) Principle 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 principle 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 T49 liquid waste incinerator.

D.12.6 Carbon Monoxide (CO) Emission Standards [326 IAC 2-2-3, 40 CFR Part 52, Subpart P, and 40 CFR 63.1203]

(a) 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 T49 liquid waste incinerator stack exhaust shall not exceed 100 ppmv dry corrected to 7% oxygen, rolled on an hourly basis, at all times the incinerator is operating except during periods of startup, shutdown, and malfunction.

(b) In order to satisfy the carbon monoxide emission limitations in the approved SIP [40 CFR Part 52, Subpart P], the Permittee shall control carbon monoxide emissions in a direct flame afterburner or other controls approved by the Commissioner. Compliance with the emission limits described in D.12.6 (a) constitutes an approved control methodology. The terms of Condition D.12.6 (b) will no longer apply upon USEPA approval of the revised requirements of 326 IAC 9-1-2 into the SIP because the T49 liquid waste incinerator is subject to 40 CFR 63, Subpart EEE.

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 corrected to 7% oxygen or 99.99 percent, reported as propane.

(b) During the POHC DRE test, the CO emissions shall not exceed an hourly rolling average of 100 ppmv dry corrected to 7% oxygen (monitored with 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 T49 liquid waste incinerator 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) 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) An emission standard monitored by the CO CEMS is exceeded;

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

(4) Upon malfunction of a CMS (excluding the NOx 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) 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,

(2) Take appropriate corrective measures to minimize future AWFCOs, and

(3) Record the findings and corrective measures in the operating record.

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

The LDAR standards that apply to components associated with the waste transfer/feed systems connected to the T49 liquid waste incinerator 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 T49 liquid waste incinerator 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 T49 liquid waste incinerator.

Said programs shall be of a technical level commensurate with the person's duties as specified in the training manual. All operating training and certification programs shall be recorded in the operating record.

(b) A certified control room operator shall be on duty at the site at all times the T49 liquid waste incinerator is in operation and the T49 liquid waste incinerator, 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, which shall be maintained in the operating record:

(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 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 T49 liquid waste incinerator, including associated air emission control equipment and CEMS and CMS, 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 T49 liquid waste incinerator system, 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.12.15.

(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)(9) – Preventive maintenance procedures and corrective maintenance procedures that include those procedures taken to ensure continuous operation and to minimize malfunctions.

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

D.12.13 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) The Permittee shall submit a notification of intention to conduct a comprehensive performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least one year before the performance test and performance evaluation are scheduled to begin.

(2) The Permittee shall perform initial comprehensive performance tests within 6 months after the HWC MACT compliance date unless an exemption is granted pursuant to 40 CFR 63.1207(e)(3).

(3) The Permittee shall submit a notification of intention to conduct the comprehensive performance test at least 60 calendar days before the test is scheduled to begin.

(4) The initial comprehensive performance tests 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.

(5) The operating parameters defined in Condition D.12.15 shall be monitored during the performance test to establish the parametric limits.

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

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

(8) 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.

(9) 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; 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.

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

(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 comprehensive testing requirements established.

D.12.14 Continuous Emissions Monitoring Systems (CEMS) Operating Requirements [40 CFR 63.1209, 40 CFR 63.8, 326 IAC 2-7-24, 326 IAC 3-5, 326 IAC 2-1.1-11, 40 CFR 60, Appendix B, and 40 CFR 60, Appendix F]

(a) CO and O_2 CEMS Operation Requirements – The following provisions shall be applied at all times the T49 incinerator is 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 VOC [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 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 60, Appendix B.

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

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

(b) SO_2 and NOx CEMS Operation Requirements – The following requirements shall apply when the T49 Incinerator is burning waste

(1) The Permittee shall install and operate the SO_2 and NOx CEMS in accordance with the QA/QC criteria set forth in 40 CFR 60, Appendix B and 40 CFR 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 NOx CEMS malfunction:

(A) When the SO_2 CEMS malfunctions, the Permittee shall monitor and record the Hydro-Sonic™ equivalent pressure drop and scrubber liquid flow rate as required by Condition D.12.15 (a)(3)(C) and (D) and the scrubber liquid pH as required by Condition D.12.15 (a)(5)(C).

(B) When the NOx CEMS malfunctions, the Permittee shall monitor and record the combustion chamber temperature, combustion air flow rate, and primary and secondary waste feed rates as required by Condition D.12.15 (a)(1), and assess NOx emissions, using waste testing, waste shipment and 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 NOx BACT limit.

D.12.15 Parametric Continuous Monitoring Systems (CMS) Requirements [40 CFR 63.8(c), 40 CFR 63.1209, and 326 IAC 2-1.1-11]

(a) The Permittee shall operate the following CMS in accordance with the quality assurance requirements specified in 40 CFR 63.1209(d) at all times the T49 incinerator is 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 shall be monitored at all times the T49 incinerator is in operation. In addition, the operating parameters monitored by the following CMSs shall not exceed the established operating parameter limits at all times the T49 incinerator is 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 rolling hourly average combustion chamber temperature established from the average temperature measured during the three DRE test runs;

(B) Combustion Air Flow Rate - Maximum hourly rolling average combustion air flow rate established from the average of the maximum hourly rolling average for each performance test run; and

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

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

(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 those parameters identified in Condition D.12.15 (a)(1).

(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;

(B) Scrubber Liquids Solid Content - Maximum 12-hour rolling average solids content of the scrubber liquid using a continuous monitoring system established from the average of the performance test run averages. This parameter does not apply to mercury;

(C) Hydro-Sonic™ Equivalent Pressure Drop - Minimum hourly rolling average pressure drop across the Hydro-Sonic™ scrubber established from the average of the performance test run averages;

(D) Scrubber Liquid Flow Rate - Minimum hourly rolling average scrubber liquid flow rate established from the average of the performance test run averages; and

(E) Flue Gas Flow Rate - Maximum hourly rolling average flue gas flow rate, the maximum production rate, or another surrogate parameter for gas residence time, established from the average of the maximum hourly rolling averages for each test run.

(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.12.15 (a)(3)(B), (C), and (D); and

(B) Ash Feed Rate - Maximum 12-hour average ash feed rate established from the average of the test run averages.

(5) HCl/Cl_2 and Fluorides CMS Requirements – Pursuant to the HWC MACT standards [40 CFR 63.1209(o)] and compliance 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.12.15 (a)(3)(C), (D) and (E).

(B) Waste Feed Rate - Maximum 12-hour rolling average feed rates 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)]

(C) Scrubber Liquid pH - Minimum hourly rolling average scrubber liquid pH established from the average of the performance test run averages. [40 CFR 63.1209(o)(3)(iv)]

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

(c) Pursuant to the HWC MACT standards [40 CFR 63.1209(a)(5)] and the compliance monitoring methods for PSD sources [326 IAC 2-1.1-11], the Permittee may petition the Administrator to use CEMS for compliance 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.

D.12.16 Minimum Data Requirements – SO_2 and NOx Compliance [326 IAC 2-1.1-11]

The following defines when CEMS data must be supplemented with data required by condition D.12.14 (b)(3), D.12.17 (a)(12), and D.12.18 (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 Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.12.17 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.12.14 and D.12.15;

(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) 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 of the 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 T49 liquid waste incinerator 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 by Condition D.12.11 and 4 0 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.12.16 requires that CEMS data must be supplemented, the documentation of the information required by Condition D.12.14 (b)(3).

D.12.18 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 [63.7-63.10], PSD BACT requirements [326 IAC 2-1.1-11], and the continuous emissions monitoring requirements [326 IAC 3-5]:

(A) Reports shall be submitted within 30 days following the reporting period 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 63.10(c)(5)-(c)(13);

(C) SSM summary reports for the T49 waste incinerator control system, including associated CEMS and CMS equipment;

(D) Excessive exceedances report, if applicable, as required by 40 CFR 63.1206(c)(3)(vi); and

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

(A) A list of days when condition D.12.16 requires that CEMS data must be supplemented that provides:

(B) A detailed report for each day when condition D.12.16 requires that CEMS data must be supplemented:

(i) the information required by Condition D.12.14 (b)(3), and

(ii) an analysis of whether that information indicates continuous compliance with the limit established in Condition D.12.3 or D.12.4, and if the NOx CEMS malfunctions for greater than six

continuous hours, an assessment of NOx emissions using waste testing, waste shipment, and process knowledge 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 NOx 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 T49 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 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.12.19 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.

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SECTION D.13 T149 ROTARY KILN INCINERATOR, 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
T149 Rotary Kiln incinerator with Secondary Combustion Chamber (Natural Gas for Startup, Fuel Oil for Deslagging Operations)	T149	T149 Stack	50 MMBtu/hr	SNCR; Condenser/Absorber; Hydro-SonicTM Scrubber

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

D.13.1 General Applicability Requirements with Emission Standards [326 IAC 2-2-3 and 40 CFR 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.13.2, D.13.3, D.13.4, D.13.5, D.13.6, and D.13.7 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 T149 rotary kiln incinerator shall have a permit issued under 40 CFR 270 whenever off-site waste material is treated and destroyed in the T149 rotary kiln incinerator. The incinerator shall operate in accordance with the HWC MACT standards under 40 CFR 63, Subpart EEE.

(c) Pursuant to the HWC MACT standards [40 CFR 63.1206(b)(5)(ii) and (iii)] and the PSD BACT 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), as long as the Permittee complies with the following requirements:

(1) If it is determined that the change may adversely affect compliance with any emission standard, the Permittee shall comply with the requirements specified in 40 CFR 63.1206(b)(5)(i) prior to implementing the change(s).

(2) If it is determined that the change will not adversely affect compliance with the emission standards of this condition, the Permittee may implement the change(s) but must revise as necessary the performance test plan, Documentation of Compliance, Notification of Compliance, and startup, shutdown, and malfunction plan, to reflect the change(s).

D.13.2 Particulate Matter Emission Standards [40 CFR 63.1203 and 40 CFR 52, Subpart P]

(a) In order to satisfy the HWC MACT standards [40 CFR 63.1203(b)(7)] and the approved Indiana State Implementation Plan (SIP) applicable to incinerators [40 CFR 52, Subpart P], the particulate matter (PM) emissions from the T149 rotary kiln incinerator stack exhaust shall not exceed 34 mg/dscm (0.015 gr/dscf), corrected to 7 percent oxygen.

(b) In order to satisfy the approved SIP applicable to incinerators [40 CFR Part 52, Subpart P], the T149 rotary kiln incinerator shall:

(1) Consist of primary and secondary chambers or the equivalent. The design and operation of this incinerator in accordance with the requirements of this section of the permit is equivalent to the design and operation of a primary and secondary chamber.

(2) Be equipped with a primary burner unless burning wood products,

(3) Comply with 326 IAC 5-1 and 326 IAC 2,

(4) Be maintained properly as specified by the manufacturer and approved by the commissioner. The issuance of this permit shall be considered approval by the commissioner.

(5) Be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner. The issuance of this permit shall be considered approval by the commissioner.

(6) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators,

(7) Be operated so that emissions of hazardous material including, but not limited to, viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented,

(8) Not emit particulate matter in excess of three-tenths (0.3) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air, and

(9) Not create a nuisance or a fire hazard.

If any of the above result, the burning shall be terminated immediately.

The terms of Condition D.13.2 (b)(2) will no longer apply upon USEPA approval of the revised requirements of 326 IAC 4-2 (26 Ind. Reg. 1071) into the SIP because the T149 rotary kiln incinerator is subject to 40 CFR 63, Subpart EEE.

D.13.3 Sulfur Dioxide (SO_2) Emission Standards [326 IAC 2-2-3 and 326 IAC 7-1.1-2]

(a) In order to satisfy the PSD BACT requirements [326 IAC 2-2-3], the T149 rotary kiln incinerator shall be equipped with a caustic scrubber system to control SO_2 emissions. The SO_2 emissions from the incinerator stack exhaust shall not exceed 400 ppmv dry corrected to 7% oxygen, averaged over a 24-hour daily period when burning waste streams.

(b) In order to satisfy the State SO_2 rules [326 IAC 7-1.1-2], the SO_2 emissions from the combustion of fuel oil during the deslagging process in the T149 rotary kiln incinerator shall not exceed 0.5 pounds per million British thermal units (lbs/MMBtu).

D.13.4 Oxides of Nitrogen (NOx) Emission Standards [326 IAC 2-2-3]

In order to satisfy the PSD BACT requirements [326 IAC 2-2-3], the T149 rotary kiln incinerator shall be equipped with selective non-catalytic reduction (SNCR) equipment to control NO_x emissions. The NOx emissions from the incinerator stack exhaust shall not exceed 170 ppmv dry corrected to 7% oxygen, expressed as NO_2, averaged over a 24-hour daily period when burning waste streams.

D.13.5 Hazardous Air Pollutant (HAP) Emission Standards [40 CFR 63.1203]

Except for periods of startup, shutdown and malfunctions, the following emission standards shall apply at all times the T149 rotary kiln incinerator is operating:

(a) Mercury – Pursuant to the HWC MACT standards [40 CFR 63.1203(b)(2)], the mercury emissions from the T149 rotary kiln incinerator stack exhaust shall not exceed 45 ug/dscm, corrected to 7% oxygen.

(b) Lead and Cadmium – Pursuant to the HWC MACT standards [40 CFR 63.1203(b)(3)], the total semi-volatile metals (lead and cadmium) emissions from the T149 rotary kiln incinerator stack exhaust shall not exceed 120 ug/dscm, corrected to 7 percent oxygen.

(c) Arsenic, Beryllium, and Chromium – Pursuant to the HWC MACT standards [40 CFR 63.1203(b)(4)], the total low volatile metals (arsenic, beryllium, and chromium) emissions from the T149 rotary kiln incinerator stack exhaust shall not exceed 97 ug/dscm, corrected to 7 percent oxygen.

(d) Hydrochloric Acid/Chlorine Gas (HCl/Cl_2) and Fluorides - In order to satisfy the HWC MACT standards [40 CFR 63.1203(b)(6)], the HCl/Cl_2 emissions from the T149 rotary kiln incinerator stack exhaust shall not exceed 21 ppmvdc, expressed as HCl equivalent. In order to satisfy the PSD BACT requirements for fluorides [326 IAC 2-2-3], the T149 rotary kiln incinerator control system shall achieve an HCl control efficiency of 98 percent or greater.

(e) Dioxin/Furans – Pursuant to HWC MACT standards [40 CFR 63.1203(b)(1)], the dioxin/furan emissions from the T149 rotary kiln incinerator stack exhaust shall not exceed 0.20 ng TEQ/dscm, corrected to 7 percent oxygen.

(f) Principle Organic Hazardous Constituents (POHCs) – Pursuant to 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 principle 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 T149 rotary kiln incinerator.

D.13.6 Carbon Monoxide (CO) Emission Standards [326 IAC 2-2-3, 40 CFR Part 52, Subpart P, and 40 CFR 63.1203]

(a) In order to satisfy the HWC MACT standards [40 CFR 63.1203(b)(5)(i)] and the PSD BACT requirements [326 IAC 2-2-3], the CO emissions from the T149 rotary kiln incinerator stack exhaust, as monitored by a continuous emissions monitoring system (CEMS), shall not exceed 100 ppmv dry corrected to 7% oxygen, averaged over an hourly rolling basis, at all times the incinerator is operating except during startup, shutdown and malfunctions.

(b) In order to satisfy the CO emission limitations in the approved State Implementation Plan (SIP) [40 CFR Part 52, Subpart P], the Permittee shall control carbon monoxide emissions in a direct flame afterburner or other controls approved by the Commissioner. Compliance with the emission limits described in D.13.6 (a) constitutes an approved control methodology. The terms of Condition D.13.6 (b) will no longer apply upon USEPA approval of the revised requirements of 326 IAC 9-1-2 into the SIP because the T149 rotary kiln incinerator is subject to 40 CFR 63, Subpart EEE.

D.13.7 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 [40 CFR 63.1203(b)(5)(i)] and the PSD BACT requirements [326 IAC 2-2-3], the highest hourly rolling average hydrocarbon emissions achieved, as monitored with a CEMS during an acceptable DRE test, shall not exceed 10 ppmv dry corrected to 7% oxygen or 99.99 percent, reported as propane.

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

D.13.8 Automatic Waste Feed Cutoff System Requirements [40 CFR 63.1206]

In order to satisfy the HWC MACT standards, the Permittee shall operate the T149 rotary kiln incinerator 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) 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) An emission standard monitored by the CO CEMS is exceeded;

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

(4) Upon malfunction of a CMS (excluding the NOx 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 feedrate 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) 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,

(2) Take appropriate corrective measures to minimize future AWFCOs, and

(3) Record the findings and corrective measures in the operating record.

D.13.9 Leak Detection and Repair (LDAR) Program [326 IAC 2-2-3, 40 CFR 63, Subpart DD, 40 CFR 61, Subpart V]

The LDAR standards that apply to components associated with the waste transfer/feed systems connected to the T149 rotary kiln incinerator are described in Section E.2 of this permit.

D.13.10 Inspection Requirements [and 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 T149 rotary kiln incinerator 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.13.11 Training and Certification Requirements [40 CFR 63.1206(c)(6)]

(a) Pursuant to 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 T149 rotary kiln incinerator.

Said programs shall be of a technical level commensurate with the person's duties as specified in the training manual. All operating training and certification programs shall be recorded in the operating record.

(b) A certified control room operator shall be on duty at the site at all times the T149 rotary kiln incinerator is in operation and the T149 rotary kiln incinerator, 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.13.12 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, which shall be maintained in the operating record:

(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 T149 rotary kiln incinerator, including associated air emission control equipment and CEMS and CMS, 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 T149 rotary kiln incinerator system, 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) Emergency Safety Vent (ESV) Operating Plan – The ESV Operating Plan shall be developed and implemented in accordance with 40 CFR 63.1206(c)(4). The emission standards and operating plans apply even if hazardous waste is in the combustion chamber.

(d) 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.13.15.

(e) Continuous Emissions Monitoring System (CEMS) Standard Operating Procedures (SOP) – The Permittee shall prepare and implement an SOP that provides step-by-step procedures and operations of the CEMS in accordance with 326 IAC 3-5-4(a) (9) – Preventive maintenance procedures and corrective maintenance procedures that include those procedures taken to ensure continuous operation and to minimize malfunctions.

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

D.13.13 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) The Permittee shall submit a notification of intention to conduct a comprehensive performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least one year before the performance test and performance evaluation are scheduled to begin.

(2) The Permittee shall perform initial comprehensive performance tests within 6 months following the initial introduction of hazardous waste in the rotary kiln incinerator unless an exemption is granted pursuant to 40 CFR 63.1207(e)(3).

(3) The Permittee shall submit a notification of intention to conduct the comprehensive performance test at least 60 calendar days before the test is scheduled to begin.

(4) The initial comprehensive tests 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.

(5) The operating parameters defined in Condition D.13.15 shall be monitored during the performance test to establish the parametric limits.

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

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

(8) 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.

(9) 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; 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.

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

(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.13.2, D.13.5, and D.13.7 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 comprehensive testing requirements established.

D.13.14 Continuous Emissions Monitoring Systems (CEMS) Operating Requirements [40 CFR 60, Appendix B and Appendix F, 40 CFR 63.8, 326 IAC 2-1.1-11, 326 IAC 3-5]

(a) CO and O_2 CEMS Operation Requirements – The following requirements shall be applied at all times the T149 rotary kiln incinerator is 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 VOC [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 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 60, Appendix B.

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

(3) Continuous operation is defined as the collection of at least one measurement for each successive 15-second period, regardless of startup, shutdown and malfunction.

(b) SO_2 and NOx CEMS Operation Requirements – The following requirements shall apply when the T149 rotary kiln incinerator is burning waste:

(1) The Permittee shall install and operate the SO_2 and NOx CEMS in accordance with the QA/QC criteria set forth in 40 CFR 60, Appendix B and 40 CFR 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.13.12 (b) shall include procedures for monitoring and recording the following information during times of SO_2 or NOx CEMS malfunction:

(A) When the SO_2 CEMS malfunctions, the Permittee shall monitor and record the Hydro-Sonic™ equivalent pressure drop and scrubber liquid flow rate as required by Condition D.13.15 (a)(3)(C) and (D) and the scrubber liquid pH as required by Condition D.13.15 (a)(5)(C).

(B) When the NOx CEMS malfunctions, the Permittee shall monitor and record the combustion chamber temperature, combustion air flow rate, and primary and secondary waste feed rates as required by Condition D.13.15 (a)(1), and assess NOx emissions, using waste testing, waste shipment and 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 1,379 pounds per hour that formed the basis of the NOx BACT limit.

D.13.15 Parametric Continuous Monitoring Systems (CMS) Requirements [40 CFR 63.8(c), 40 CFR 63.1209, and 326 IAC 2-1.1-11]

(a) 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 T149 incinerator is 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 shall be monitored at all times the T149 incinerator is in operation. In addition, 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 rolling hourly average combustion chamber temperature established from the average temperature measured during the three DRE test runs;

(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; and

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

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

(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 those parameters identified in Condition D.13.16 (a)(1).

(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;

(B) Scrubber Liquids Solid Content - Maximum 12-hour rolling average solids content of the scrubber liquid using a continuous monitoring system established from the average of the performance test run averages. This parameter does not apply to mercury;

(C) Hydro-Sonic™ Equivalent Pressure Drop - Minimum hourly rolling average pressure drop across the Hydro-Sonic™ scrubber established from the average of the performance test run averages;

(D) Scrubber Liquid Flow Rate - Minimum hourly rolling average scrubber liquid flow rate established from the average of the performance test run averages; and

(E) Flue Gas Flow Rate - Maximum hourly rolling average flue gas flow rate, the maximum production rate, or another surrogate parameter for gas residence time, established from the average of the maximum hourly rolling averages for each test run.

(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.13.15(a)(3)(B), (C), and (D); and

(B) Ash Feed Rate - Maximum 12-hour average ash feed rate established from the average of the test run averages.

(5) HCl/Cl_2 and Fluorides CMS Requirements – Pursuant to the HWC MACT standards [40 CFR 63.1209(o)] and compliance 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.13.16 (a)(3)(C), (D) and (E).

(B) Waste Feed Rate - Maximum 12-hour rolling average feed rates 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)]

(C) Scrubber Liquid pH - Minimum hourly rolling average scrubber liquid pH established from the average of the performance test run averages. [40 CFR 63.1209(o)(3)(iv)]

(b) Continuous operation is defined as the collection of at least one measurement for each successive 15-second period, regardless of startup, shutdown and malfunction.

(c) Pursuant to the HWC MACT standards [40 CFR 63.1209(a)(5)] and the compliance monitoring methods for PSD sources [326 IAC 2-1.1-11], the Permittee may petition the Administrator to use CEMS for compliance 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 (a) and (c) of this condition.

D.13.16 Fuel Oil Sampling and Analysis for SO_2 [326 IAC 2-1.1-11] [326 IAC 3-7-4]

Pursuant to 326 IAC 3-7-4, the Permittee shall maintain sampling and analysis certification records of the fuel oil sulfur content in accordance with approved ASTM methods.

D.13.17 Minimum Data Requirements – SO_2 and NOx Compliance [326 IAC 2-1.1-11]

The following defines when CEMS data must be supplemented with data required by condition D.13.14 (b)(3), D.13.18 (a)(13), and D.13.19 (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 percent 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 Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.13.18 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.13.14, D.13.15, and D.13.17;

(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.13.12;

(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) 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.13.10 (b) and 40 CFR 63.1206(c)(3)(vii);

(9) Corrective measures for any ESV opening as required by 40 CFR 63.1206(c)(4)(iii);

(10) Daily visual inspection records of the T149 rotary kiln incinerator to ensure the combustion zone is sealed as required by Condition D.13.10 (a) and 40 CFR 63.1206(c)(5);

(11) A copy of the Operator Certification and Training Program required by Condition D.13.11 and 40 CFR 63.1206(c)(6); and

(12) Documentation of the changes in modes of operation as required by 40 CFR 63.1209(q).

(13) For days when condition D.13.17 requires that CEMS data must be supplemented, the documentation of the information required by Condition D.13.14 (b)(3).

(b) The record keeping and reporting requirements for the LDAR standards are described in Section E.2 of this permit.

(c) The Permittee shall maintain quarterly records of all fuel oil used in the T149 rotary kiln incinerator on a calendar month average basis, for the following:

(1) Sulfur content;

(2) Heat content;

(3) Fuel consumption; and

(4) Sulfur dioxide emission rate in pounds per MMBtu.

D.13.19 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 [63.7-63.10], PSD BACT requirements [326 IAC 2-1.1-11], and the continuous emissions monitoring requirements [326 IAC 3-5]:

(A) Reports shall be submitted within 30 days following the reporting period 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 63.10(c)(5-(c)(13);

(C) SSM summary reports for the T149 rotary kiln incinerator control system, including associated CEMS and CMS equipment;

(D) Excessive exceedances report, if applicable, as required by 40 CFR 63.1206(c)(3)(vi); and

(E) Emergency safety vent opening reports as require by 40 CFR 63.1206(c)(4)(iv); and

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

(A) A list of days when condition D.13.17 requires that CEMS data must be supplemented

(B) A detailed report for each day when condition D.13.17 requires that CEMS data must be supplemented that provides:

(i) the information required by Condition D.13.14 (b)(3), and

(ii) an analysis of whether that information indicates continuous compliance with the limit established in Condition D.13.3 or D.13.4, and if the NOx CEMS malfunctions for greater than six continuous hours, an assessment of NOx emissions using waste testing, waste shipment, and process knowledge 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 1,379 pounds per hour that formed the basis of the NOx 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 T149 incinerator system SSM event that results in an exceedance of a relevant emission standard when those actions are in consistent 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 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.13.20 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.14 BPM 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:

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

Emission Unit Description	Building	Stack/Vent	Nominal Capacity	Control Device
Regenerative Thermal Oxidizer 1 (RTO1)	RTO1	RTO1 Stack	36 MMBtu/hr	Caustic Scrubber System
Regenerative Thermal Oxidizer 2 (RTO2)	RTO2	RTO2 Stack	36 MMBtu/hr	Caustic Scrubber System

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 of the production building roof fans exhausting to the RTO fume transport system and 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.14.1 Control Device and Closed Vent System Standards [40 CFR 63.1253(b), (c), and (d), 63.1254(a) and (c), 63.1256(b), (e), and (h), 63.1258(b), 40 CFR 63.685(c) and (d), 63.689(b), 63.690(b), 63.693(f), 40 CFR 60.112b(a) and 60.113b(c), 326 IAC 2-2-3, and 326 IAC 8-5-3(b)]

(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.14.2 (a):

(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 (NOx) – In order to satisfy PSD BACT requirements [326 IAC 2-2-3], NOx 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 not exceed a 24-hour daily average of 100 ppmv.

(4) Volatile Organic Compounds (VOC)/Volatile Organic Hazardous Air Pollutant (VOHAP) – In order to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1253(b), (c), and (d), 63.1254(a) and (c), and 63.1256(b), (e) and (h), and 63.1258(b)], the Offsite Waste and Recovery Operations MACT requirements [40 CFR 63.685(c) and (d), 63.689(b), 63.690(b), and 63.693(f)], the PSD BACT requirements [326 IAC 2-2-3], the Synthetic Pharmaceutical RACT requirements [326 IAC 8-5-3(b)], 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) 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 RTO combustion chamber temperature shall not be less than 1500F over a 24-hour daily average; and

(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 3340 standard cubic feet per second; or

(B) Control Efficiency Emission 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 RTO combustion chamber temperature shall not be less than 1500F over a 24-hour daily average; 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.

The Permittee shall conduct a performance test for TOC before the control efficiency monitoring approach is used to assess compliance with this control efficiency standard

(5) Hydrogen Halide/Halogen and Fluorides – In order to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1253(b), (c), and (d), 63.1254(a) and (c), 63.1256(b), (e) 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 Emission Standard:

(i) The hydrogen halide and halogen emissions, which include 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.

The Permittee shall conduct a performance test for HCl before the control efficiency monitoring approach is used to assess compliance with this control efficiency standard.

(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.14.2 (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 (e)(1) and 63.1258(h)], the Offsite Waste MACT requirements [40 CFR 63.685(g), 63.689(b), 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, if not subject to the LDAR requirements established in Section E of this permit.

(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 (A) or (B) 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), 63.1253(b) and (c), and 63.1258(b)], the Offsite Waste MACT requirements [40 CFR 63.685(g), 63.689(b), 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.14.2 Exceptions to RTO Control System Standards [40 CFR 63.1260(g), 40 CFR 63.6(e)(3) and 63.8(c), and 40 CFR 63.681, 63.685(g), 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 bypass the RTO system at any time conditions require it to do so to avoid unsafe conditions.

(2) The provisions of Conditions D.14.1 (a) shall not apply during periods of startup, shutdown or malfunction that preclude the Permittee from complying with Condition D.14.1 (a), provided the Permittee complies with the provisions of the startup, shutdown, and malfunction plan (SSM Plan) required by Condition D.14.3.

(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.14.3 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 2-2.1.11].

(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 plans and/or 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 air pollution control, CEMS, and CMS equipment.

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

D.14.4 Continuous Emissions Monitoring System (CEMS) Requirements [40 CFR 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, NOx, and SO_2 CEMS Operation Requirements –The following requirements shall apply when the RTO is burning waste fume streams:

(1) The Permittee shall install and operate the CO, NOx, and SO_2 CEMS in accordance with the quality assurance/quality control (QA/QC) criteria set forth in 40 CFR 60, Appendix B, and 40 CFR 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.14. 3 (b) shall include procedures for monitoring and recording the following information during times of CO or SO_2 or NOx CEMS malfunction:

(A) When the SO_2 CEMS malfunctions, the Permittee shall monitor and record the scrubber liquid recirculation flow rate and caustic flow rate as required by Condition D.14. 6(b)(1) (A) and (B) respectively and the scrubber liquid pH as required by Condition D.14.6 (b)(1)(C).

(B) When CO CEMS malfunctions, the Permittee shall monitor and record the RTO combustion chamber temperature, and exhaust airflow rate from the RTO as required by D.14.6 (a)(1) and (3), respectively.

(C) When the NOx CEMS malfunctions, the Permittee shall monitor and record the combustion chamber temperature and exhaust airflow rate from the RTO as required by D.14.6 (a) (1) and (3), and assess NOx emissions, using process knowledge, to determine whether the quantity of nitrogen fed into the RTOs 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 NOx BACT limit.

(b) TOC CEMS 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(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 CEMS in accordance with the QA/QC criteria set forth in 40 CFR 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.

(c) HCl CEMS Operation Requirements – The following requirements shall apply only when burning waste fume streams and represent streamlined requirements for 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 performance and QA/QC criteria established in the *Updated Alternative Monitoring Plan for Hydrogen Chloride Continuous Emission Monitoring Systems for the Regenerative Thermal Oxidizers* submitted to EPA OAQPS on August 15, 2003, as allowed by 40 CFR 63.1258(b) 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) CEMS Standard Operating Procedures (SOP) - The Permittee shall prepare and implement an SOP that provides step-by-step procedures and operations in accordance with 326 IAC 3-5-4(a) (9) – Preventive maintenance procedures and corrective maintenance procedures that include those procedures taken to ensure continuous operation and to minimize malfunctions.

D.14.5 Performance Testing Requirements [40 CFR 60.113b(c), 40 CFR 63.7, 40 CFR 63.1257(b), (c), and (d) and 63.1258(b)(3), 40 CFR 63.693(f), 326 IAC 3-6-3(c), 326 IAC 2-7-24, and 326 IAC 2-1.1-11]

(a) Initial Comprehensive Performance Test Requirements:

(1) VOC/VOHAP – When applying the control efficiency standard, the following streamlined requirements shall apply only when burning waste fume streams to satisfy the Pharmaceutical MACT standards [40 CFR 63.1257(b), (c), and (d) and 63.1258(b)], 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)]:

(A) Prior to applying the control efficiency emission standard, the Permittee shall conduct an initial performance test in accordance with the methods set forth in 40 CFR 63.1257.

(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.14.1 (a)(4)(B) 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).

(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.

(2) Hydrogen Halide/Halogen – When applying the control efficiency standard, the following requirements shall apply only when burning waste fume streams to satisfy the Pharmaceutical MACT standards [40 CFR 63.1258(b)] and the PSD BACT requirements for fluorides [326 IAC 2-1.1-11]:

(A) Prior to applying the control efficiency emission standard, the Permittee shall conduct an initial performance test in accordance with the methods set forth in 40 CFR 63.1257.

(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.14.1 (a)(5)(B) 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).

(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 of 15 days 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 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.14.6 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 streamlined requirements shall apply only when burning waste fume streams to satisfy 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).

(2) Lower Explosive Level (LEL) Concentration – When applying the VOC/VOHAP control efficiency standard, the Permittee shall install and operate the LEL CMS in accordance with 40 CFR 63.8(c).

(3) Flow Rate Monitor – When applying the VOC/VOHAP concentration emission standard, the Permittee shall install and operate airflow 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 – When applying the control efficiency standard requirements shall apply only when burning waste fume streams:

(1) 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 Standard Operating Procedure (SOP) – The Permittee shall prepare and implement a SOP for the CMS units in accordance with 40 CFR 63.8(d).

D.14.7 Excursions [40 CFR 63.1258(b)(6), 40 CFR 63.695(e)(4)]

(a) Pursuant to the Pharmaceutical MACT standards [40 CFR 63.1258(b)(7)] and the Offsite Waste MACT [40 CFR 63.695(e)(4)], excursions are defined as follows and apply to the CEMS and CMS required by Conditions D.14.4 (b) and (c), and D.14.6, 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.14.8 Minimum Data Requirements – SO_2, CO, and NOx Compliance [326 IAC 2-1.1-11]

The following defines when CEMS data must be supplemented with data required by conditions D.14. 4 (a)(3), D.14.9 (a)(1)(L), and D.14.9 (b)(2):

(a) When the period of RTO 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 percent of the operating hours, or

(b) When the period of RTO 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 Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.14.9 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.14.1 (a)(4) and D.14.1 (a)(5) in an On-Site Implementation Log (OSIL);

(B) Records of the current and superseded versions 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 checks;

(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 is consistent with procedures in the SSM Plan;

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

(K) Record of the current standard operating procedure (SOP) for the RTO CEMS and CMS units.

(L) For days when condition D.14.8 requires that CEMS data must be supplemented, the documentation of the information required by Condition D.14.4 (a)(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 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 each CVS component that is difficult to inspect and a written plan for inspecting the component at least once every five years;

(E) Record the following information if no leaks are detected during applicable Method 21 inspections 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 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 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 – 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 within 30 days following the reporting period 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 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, percentage of excursions and monitor downtime including information specified in 63.10(c)(5)-(c)(13);

(D) Report, when applicable, no excess emissions, no exceedances, no excursions, and no CMS have 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 when on waste;

(F) For CVS bypass lines without flow indicator, report periods 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 D.14. (b)(1) of this condition, the Permittee shall report the following information for the SO_2, CO, and NOx CEMS to satisfy the PSD BACT requirements [326 IAC 2-1.1-11]:

(A) A list of days when condition D.14.8 requires that CEMS data must be supplemented:

(B) A detailed report for each day when condition D.14.8 requires that CEMS data must be supplemented that provides:

(i) the information required by Condition D.14.4 (a)(3), and

(ii) an analysis of whether that information indicates continuous compliance with the limits established in Condition D.14.1 and if the NOx CEMS malfunctions for greater than six continuous hours, an assessment of NOx emissions, using process knowledge, 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 NOx 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 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 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.14.10 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.

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SECTION D.15 BPM CONTROL SYSTEMS – T79 FUME INCINERATOR SYSTEM 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:

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

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
T79-INC309	Fume Incinerator	T79-INC309	7.6 MMBtu/hr	Scrubber (313)
T79-INC310	Fume Incinerator	T79-INC310	7.6 MMBtu/hr	Scrubber (314)

(b) The following emission units are not subject to applicable requirements described in this D section:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
T79-COL304	Air Stripper Column	T79 Incinerator	4,400 gallons	T79 Incinerator
T79-COL305	Air Stripper Column	T79 Incinerator	4,400 gallons	T79 Incinerator

The T79 control system consists of two fume incinerators, identified as 309 and 310, each equipped with caustic scrubbing systems, and each exhausting to individual stacks.

The closed vent system (CVS) associated with the T79 control system begins at the outlet of the production building roof fans exhausting to the T79 fume transport system and at the outlet side of the tank conservation vents of those tank modules exhausting to the T79 fume transport system and ends at the entrance of the T79 control system.

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

D.15.1 T79 Control Device and Closed Vent System Standards [40 CFR 63.1253(b), (c), and (d), 63.1254(a) and (c), 63.1256(b), (e), and (h), 63.1258(b), 40 CFR 63.685(c) and (d), 63.689(b), 63.690(b), 63.693(f), 40 CFR 60.112b(a) and 60.113b(c), 326 IAC 2-2-3, and 326 IAC 8-5-3(b)]

(a) T79 Control Device Standards – The T79 control device standards shall apply at all times the unit is burning waste fume streams, except as provided in Condition D.15.2 (a):

(1) VOC/VOHAP Emission Standards – In order to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1253(b), (c), and (d), 63.1254(a) and (c), and 63.1256(b), (e) and (h), and 63.1258(b)], the Offsite Waste and Recovery Operations MACT requirements [40 CFR 63.685(c) and (d), 63.689(b), 63.690(b), and 63.693(f)], the PSD BACT requirements [326 IAC 2-2-3], the Synthetic Pharmaceutical RACT requirements [326 IAC 8-5-3(b)], 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 the following streamlined VOC/VOHAP emission standards:

(A) The VOC/VOHAP emissions shall be reduced by a control efficiency of 98% or more at the outlet of the T79 control system;

(B) The T79 combustion chamber shall maintain a minimum 24-hour daily average temperature established from a compliant stack test.

(2) Hydrogen halide and halogen Emission Standards – In order to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1253(b), (c), and (d),

63.1254(a) and (c), 63.1256(b), (e) and (h), and 63.1258(b)] and PSD BACT requirements for fluorides [326 IAC 2-2-3], the Permittee shall meet the following streamlined hydrogen halide and halogen (including hydrogen fluoride) emission standards:

(A) The HCl/Cl_2 emissions shall be reduced by a control efficiency of 98% or more at the outlet of the T79 system; and

(B) The T79 caustic scrubber system shall maintain the following parametric conditions established from a compliant stack test:

(i) Minimum 24-hour daily average scrubber liquid pH;

(ii) Minimum 24-hour daily average scrubber liquid recirculation flow rate; and

(iii) Maximum 24-hour daily average scrubber caustic flow rate.

(b) T79 Closed Vent System Inspection Standards – The following inspection standards shall apply to the T79 CVS, except as provided in Condition D.15.2 (b):

(1) The Permittee shall comply with the following CVS inspection requirements to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1256(b)(3) and (e)(1) and 63.1258(h)], the Offsite Waste MACT requirements [40 CFR 63.685(g), 63.689(b), 63.690(b), 63.693(b) and (c), and 63.695(c)], and the PSD BACT requirements [326 IAC 2-2-3]:

(A) Conduct an initial one-time Method 21 inspection on new portions of the T79 CVS not operated under negative pressure and not subject to LDAR within 150 days after startup. Portions of the T79 CVS that are operated under negative pressure shall be equipped with a pressure gauge or other pressure measurement/detection. The data output from the 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.

(B) Perform annual visual inspections of the T79 CVS for visible cracks, holes or gaps, loose connections, and broken or missing caps.

(C) Initiate repair of any leak detected on the T79 CVS no later than 5 calendar days after identification, and complete the repair 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 (A) or (B) shall be completed by the end of the next shutdown.

(2) The Permittee shall monitor each bypass line on the T79 CVS to satisfy the Pharmaceutical MACT requirements [40 CFR 63.1252(b), 63.1253(b) and (c), and 63.1258(b)], the Offsite Waste MACT requirements [40 CFR 63.685(g), 63.689(b), 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 T79 CVS 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.15.2 Exceptions to T79 Control System Standards [40 CFR 63.1260(g), 40 CFR 63.6(e)(3) and 63.8(c), and 40 CFR 63.681, 63.685(g), 63.693(b) and 326 IAC 2-2-3]

(a) Exceptions to T79 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 bypass the T79 system at any time conditions require it to do so to avoid unsafe conditions.

(2) The provisions of Conditions D.15.1 (a) shall not apply during periods of startup, shutdown or malfunction that preclude the Permittee from complying with Condition D.15.1 (a), provided the Permittee complies with the provisions of the startup, shutdown, and malfunction plan (SSM Plan) required by Condition D.15.3.

(b) Exceptions to T79 CVS 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.15.3 Startup, Shutdown, and Malfunction Requirements for T79 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 2-2.1.11].

(b) Pursuant to 40 CFR 63.6(e)(3), the Permittee shall develop an SSM Plan to ensure that the T79 fume incinerator 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 T79 system, including associated CEMS and CMS equipment, during periods of startup, shutdown, and malfunction; and

(2) Corrective action program for malfunctioning air pollution control equipment.

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

D.15.4 Performance Testing Requirements [40 CFR 60.113b(c), 40 CFR 63.7, 40 CFR 63.1257(b), (c), 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 Performance Test Requirements – The following streamlined requirements satisfy the Pharmaceutical MACT standards [40 CFR 63.1257(b), (c), and (d) and 63.1258(b)], 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)]:

(A) The Permittee shall conduct an initial performance test in accordance with the methods set forth in 40 CFR 63.1257.

(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.15.1 (a)(1) 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).

(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 of 15 days if a reasonable explanation is provided within 40 days following the test.

(2) Hydrogen Chloride Performance Test Requirements – The following requirements satisfy the Pharmaceutical MACT standards [40 CFR 63.1258(b)] and the PSD BACT requirements for fluorides [326 IAC 2-1.1-11]:

(A) The Permittee shall conduct a performance test to determine the hydrogen halides and halogens control efficiency standard, which includes fluorides, and conduct an initial performance test in accordance with the methods set forth in 40 CFR 63.1257.

(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.15.1 (a)(2) 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).

(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 of 15 days if a reasonable explanation is provided within 40 days following the test.

(b) Subsequent Comprehensive Performance Test Requirements:

The Permittee shall repeat the performance tests for VOC/VOHAP and Hydrogen Halide/Halogens at least once every five years from the date of the most recent valid compliance demonstration.

D.15.5 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, and 326 IAC 3-5-5(d)]

(a) VOC/VOHAP CMS Requirements - The following streamlined requirements apply only when burning waste fume streams to satisfy the Pharmaceutical MACT standards [40 CFR 63.1258(a) and (b)], Offsite Waste MACT standards [40 CFR 63.684(e)(1)], Volatile Organic Liquid Storage Vessel requirements [40 CFR 60.113b(c)], and PSD BACT requirements [326 IAC 2-1.1-11]:

(1) T79 Combustion Chamber Temperature – The Permittee shall install and operate the T79 combustion chamber temperature CMS in accordance with 40 CFR 63.8(c).

(2) 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 apply only when burning waste fume streams to satisfy 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) 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 Program – The Permittee shall prepare and implement a quality control program for the CMS units in accordance with 40 CFR 63.8(d).

D.15.6 Excursions [40 CFR 63.1258(b)(6)]

(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 Condition D.15.5:

(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.

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

D.15.7 Record Keeping and Reporting Requirements

(a) Record Keeping Requirements

The Permittee shall maintain the following records:

(1) Control Device (T79) Records – The Pharmaceutical MACT record keeping requirements [40 CFR 63.1259] shall serve as the streamlined requirement that satisfies 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 continuous emission monitoring and performance testing requirements [326 IAC 3-5 and 3-6]:

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

(B) Description of worst-case operating conditions;

(C) Results of control device performance tests and CMS performance evaluations;

(D) Records of all required CMS data;

(E) Records of each CMS calibration checks;

(F) Maintenance records for each control device and CMSs;

(G) Occurrence/duration records of each control device malfunction and CMS malfunction;

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

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

(J) Record of the current standard operating procedure (SOP) for the T79 CMS units.

(2) Closed Vent System (T79 CVS) Records – The Pharmaceutical MACT record keeping requirements [40 CFR 63.1259] shall serve as the streamlined requirement that satisfies 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 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) For each portion of the CVS not operated under negative pressure, record each component that is unsafe to inspect, and a plan for inspecting the component as frequently as practicable during safe-to-inspect times;

(D) For each portion of the CVS not operated under negative pressure, record each component that is difficult to inspect and a written plan for inspecting the component at least once every five years;

(E) For each part of the CVS not operated under negative pressure, record the following information if no leaks are detected during the initial Method 21 inspection or 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 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) For each part of the CVS not operated under negative pressure, record the following information for all leaks detected from the 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 Reporting Requirements

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

(A) Reports shall be submitted within 30 days following the reporting period 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 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 63.10(c)(5)-(c)(13);

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

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

(F) CVS with bypass lines without flow indicator: report periods 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;

(H) SSM summary reports for the T79 control system, including associated CEMS and CMS equipment.

(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 a T79 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 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 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.15.8 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.

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SECTION D.16 BPM SUPPORT OPERATIONS – RESEARCH AND DEVELOPMENT 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:

(a) The emission units listed below are insignificant activities as defined in 326 IAC 2-7-1(21), but are subject to applicable requirements described or referred to in this D section.

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
Building T71:				
31A985DUCHT4	Charge Tank	Atmosphere	10 gal	None
TI0031000MS001	Slurry Mill	Atmosphere	NA	None
T46109	Slurry Mill	Atmosphere	NA	None
T69126	Centrifuge	Atmosphere	5 liters	None
T63150	Plate Filter	Atmosphere	0.15 m^3	None
T44224	Filter Dryer	Atmosphere	NA	None
T71-TK5700	Waste Tank	Atmosphere	1000 gallons	None
T71-TK9601	Portable Process Tank	Atmosphere	50 gallons	None
T71-TK9602	Portable Process Tank	Atmosphere	50 gallons	None
T71-TK9605	Portable Process Tank	Atmosphere	30 gallons	None
T71-TK9606	Portable Process Tank	Atmosphere	50 gallons	None
T71-TK9609	Portable Process Tank	Atmosphere	30 gallons	None
T71-TK9610	Portable Process Tank	Atmosphere	50 gallons	None
T71-TK9611	Portable Process Tank	Atmosphere	50 gallons	None
T71-TK9612	Portable Process Tank	Atmosphere	50 gallons	None
T71-TK9613	Condensate Collection Tank	Atmosphere	10 gallons	None
T71-TK9614	Condensate Collection Tank	Atmosphere	10 gallons	None
T71-TK9615	Condensate Collection Tank	Atmosphere	10 gallons	None
T71-TK9616	Condensate Collection Tank	Atmosphere	10 gallons	None
T71-TK9617	Condensate Collection Tank	Atmosphere	20 gallons	None
T71-TK9623	Charge Tank	Atmosphere	10 gallons	None
T71-TK9624	Charge Tank	Atmosphere	10 gallons	None
T71-TK9625	Charge Tank	Atmosphere	10 gallons	None
T71-TK9626	Charge Tank	Atmosphere	10 gallons	None
T71-RVD9801	Rotary Vacuum Dryer	Atmosphere	3 cubic feet	None
T71-FLT9901	Single-Plate Filter	Atmosphere	N/A	None
T71-FLT9902	Multi-Plate Filter	Atmosphere	N/A	None

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

D.16.1 Non-Applicability Determination [40 CFR 63, Subpart GGG and 326 IAC 8-5-3]

(a) The emission units listed above are not subject to the requirements of 40 CFR 63, Subpart GGG (Pharmaceutical MACT Standards) because these operations are research and development facilities that are exempt pursuant to 40 CFR 63.1250(d) and 63.1251.

(b) The emission units listed above are not subject to the requirements of 326 IAC 8-5-3 because the potential to emit VOC of any facility is less than 15 pounds per day.

D.16.2 Reserved

D.16.3 Leak Detection and Repair (LDAR) for Fugitive Emissions [CP157-4148 (Revised by this permit)]

The LDAR standards that apply to components associated with the process operations in Building T71are described in Section E.1 of this permit and the waste tank in T71 are described in Section E.2 of this permit.

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

D.16.4 Reserved

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

D.16.5 Modifications and Construction: Advance Approval of Permit Conditions Requirements

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

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SECTION D.17 BPM SUPPORT OPERATIONS – GENERAL WASTEWATER 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.

(a) BPM Wastewater Operations – The emission units associated with the BPM wastewater operations can generally be described as storage and transfer facilities (wastewater tanks, containers and individual drain systems) and treatment facilities (chemical wastewater treatment plant, incineration, or offsite treatment). The specific emission units are described in Sections D.8, D.10, D.11, D.12, D.13, D.18 and D.19 of this permit.

(b) Fermented Products Wastewater Operations – The emission units associated with the fermented products wastewater operations can generally be described as storage and transfer facilities (biosolids tanks) and treatment facilities (biological wastewater treatment plant. The specific emission units are described in Section D.5 of this permit. The wastewater operations associated with fermented products are not subject to the storage, transfer and treatment requirements of this section of the permit because the wastewater does not meet the definition of an affected wastewater.

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

D.17.1 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).

(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 1300 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 5200 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)]

Maintenance wastewater is not considered an affected wastewater stream.

D.17.2 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 for maintenance wastewater as required under 40 CFR 63.6(e)(3). [40 CFR 63.1256(a)(4)(iii)]

D.17.3 Storage and Transfer of Affected Wastewater [40 CFR 63.1256(b), (d), and (e)]

(a) The following emission units are used to store or transfer affected wastewater from the BPM operations:

(1) BPM Containers – The emission units and performance standards are described in Section D.11 of this permit.

(2) BPM Individual Drain Systems – These emission units and performance standards for the individual drain systems are described in Section D.8 of this permit.

(3) Affected Wastewater Tanks – These emission units and performance standards are streamlined with the requirements for BPM waste tanks described in Section D.10 of this permit.

(b) The emission units in the fermented products operations do not store or transfer affected wastewater.

D.17.4 Treatment of Affected Wastewater [40 CFR 63.1256]

Pursuant to the Pharmaceutical MACT requirements under 40 CFR 63.1256, the affected wastewater and residuals shall be treated using the following methods as applicable:

(a) Enhanced biological treatment system – The equipment and performance standards for the treatment of affected wastewater using the enhanced biological treatment system are described in Section D.18 of this permit.

(b) Waste incineration – The equipment and performance standards for the thermal destruction of the affected wastewater by incineration are described in Sections D.12 and D.13 of this permit.

(c) Transfer of affected wastewater streams for offsite treatment – The performance standards for offsite disposal of affected wastewater are described in Section D.19 of this permit.

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

D.17.5 Testing and Monitoring Requirements

The requirements for the storage, transfer and treatment of the affected wastewater are described in Sections D.8, D.10, D.11, D.12, D.13, D.18 and D.19 of this permit.

Record Keeping and Reporting Requirements

D.17.6 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 SSM plan followed by a written letter within 7 working days after the end of the event.

(b) Each POD as defined in Condition D.17.1 (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.

SECTION D.18 BPM SUPPORT OPERATIONS – CHEMICAL WASTEWATER TREATMENT PLANT 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:

(a) The following emission units are subject to applicable requirements described or referred to in this D section. These emission units represent the enhanced biological treatment system.

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
BPM Wastewater Treatment Plant (WWTP):				
T78-TK511	Activated Sludge Tank	Atmosphere	8 million gallons	N/A
T78-TK512	Activated Sludge Tank	Atmosphere	8 million gallons	N/A

(b) The following emission units of the wastewater treatment system are not subject to applicable requirements described in this D section.

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	Control Device
BPM Wastewater Treatment Plant (WWTP):				
T78-TK520A*	Clarifier	Atmosphere	1.4 million gallons	N/A
T78-TK520B*	Clarifier	Atmosphere	1.4 million gallons	N/A
T78-TK520C*	Clarifier	Atmosphere	1.4 million gallons	N/A
T78-TK522*	Thickener	Atmosphere	1.4 million gallons	N/A
T78-TK550*	Emergency Diversion Tank	Atmosphere	900,000 gallons	N/A
T78-TK551*	Sludge Collection Tank	Atmosphere	700,000 gallons	N/A
TK525*	Sludge Tank	Atmosphere	193,000 gallons	N/A
TK526*	Sludge Tank	Atmosphere	193,000 gallons	N/A

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

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

D.18.1 Pharmaceutical MACT Standards [40 CFR 63.1256]

(a) Pursuant to the Pharmaceutical MACT standards for wastewater [40 CFR 63.1256(g)(10)], the Permittee may use the enhanced biological treatment system (activated sludge tank T78-TK511 or T78-TK512) to treat affected wastewater streams, defined in Section D.17 of this permit, except:

(1) Mixed (soluble and partially soluble HAP) wastewater streams greater than 5200 ppmw, where the partially soluble HAP component is equal to or greater than 50 ppmw; or

(2) Wastewater streams containing combined partially soluble HAPs greater than 1300 ppmw.

(b) Pursuant to the Pharmaceutical MACT standards for wastewater [40 CFR 63.1251 and 40 CFR 63.1256(g)(10)], the Permittee shall maintain a minimum mixed liquor volatile suspended solids (biomass) concentration of 1 kg/cubic meter (942 mg/l) of the mixed liquor in the enhanced biological treatment system.

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

D.18.2 Sampling and Analysis Requirements [40 CFR 63.1258(g)(2)]

Pursuant to the Pharmaceutical MACT standards [40 CFR 63.1258(g)(2)], the Permittee shall measure the following parameters for each enhanced biological treatment unit in use at least once per week and record the weekly average data:

(a) Total suspended solids (TSS), chemical oxygen demand (COD); and

(b) Biomass (VSS) concentration.

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

D.18.3 Record Keeping and Reporting Requirements

(a) The Permittee shall maintain the sampling and analysis records required by Condition D.18.2 in accordance with the Pharmaceutical MACT record keeping requirements [40 CFR 63.1259(b)(1)].

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

D.18.4 Modifications and Construction: Advance Approval of Permit Conditions Requirements

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

SECTION D.19 BPM 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 generated 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.19.1 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 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.19.2 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)] [326 IAC 2-7-19]

D.19.3 Record keeping and Reporting Requirements

(a) The Permittee shall keep records of all notifications required by Conditions D.19.1 and D.19.2 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.19.4 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 E.1 LEAK DETECTION AND REPAIR (LDAR) CONDITIONS FOR BPM PROCESS 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) BPM process systems consist of process operations and non-waste storage serving bulk pharmaceutical manufacturing operations. LDAR applies 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 means that a piece or equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight VOHAP/VOC.

(b) LDAR BPM process system components are located from the point at which raw material serving the BPM operations is unloaded at the plant site to the point of determination (POD) or point where waste exits the pharmaceutical manufacturing process unit (PMPU). The closed-vent systems not used to control emissions from LDAR components are not subject to the conditions of this section, but instead are subject to the conditions in Sections D.14, and D.15, as applicable.

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

E.1.1 LDAR Standards for BPM Process System Components [40 CFR 63.1255, 40 CFR 61 Subpart I, 326 IAC 8-5-3(b)(6), 326 IAC 2-2, CP157-4148 (Revised by this permit)]

Except as provided in Condition E.1.2, the following LDAR standards satisfy the requirements of the Pharmaceutical Production MACT (Pharma MACT) standards [40 CFR 63.1255], Best Available Control Technology (BACT) requirements [326 IAC 2-2-3], Reasonably Available Control Technology (RACT) LDAR requirements for synthesized pharmaceutical manufacturing operations [326 IAC 8-5-3(b)(6)], and construction permit [CP157-4148] requirements for LDAR components associated with the research and development operations in Building T71:

(a) The Permittee shall implement the LDAR program under 40 CFR 63.1255 for all BPM process system component types listed in item (a) of the facility description section from the point at which raw material serving BPM is unloaded at the plant site to the point of determination (POD) or point where waste exits the pharmaceutical manufacturing process unit (PMPU).

(b) The Permittee shall conduct an initial monitoring survey that includes the total number of each existing BPM process component type and initial monitoring as follows:

(1) Existing BPM process system components in VOHAP service shall be initially monitored between October 21, 2002 and October 21, 2003.

(2) Existing BPM process system components in VOC service shall be initially monitored for purposes of this permit between October 21, 2002 and October 21, 2003.

(3) Subsequent monitoring periods shall be calendar periods, beginning October 22, 2003.

(c) Each new or changed BPM process 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 BPM process 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 60, Appendix A, Method 21 and 40 CFR 63.1255(b)(4)(v). The regulatory language cited by reference in this section appears in full in Appendix A.

(1) Pumps in light liquid service shall be operated in accordance with the standard at 63.1255(c). This section provides, generally and in part:

(A) Single seal pumps shall undergo periodic monitoring and visual inspections;

(B) Dual mechanical seal pumps shall meet design, operation, inspection, and alarm requirements;

(C) Pumps designed without a shaft penetrating the pump housing are not required to be inspected or monitored; and

(D) Pumps equipped with a closed-vent system limitable 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.

(2) Compressors shall be operated in accordance with the standards at 63.1255(b)(3), which requires compliance with 63.164. 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.

(3) Pressure relief devices in gas/vapor service shall be operated in accordance with the standard at 63.1255(b)(3), which requires compliance with 63.165. 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.1.1 (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.1.1 (d)(3)(i) and (ii) without monitoring if it is routed to a process or fuel gas system or

equipped with a closed-vent system limitable 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 63.1255(b)(3), which requires compliance with 63.166. 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;

(ii) Collect and recycle the purged process fluid to a process;

(iii) Be designed and operated to capture and transport the purged process fluid to a control device;

(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; or

(v) In-situ sampling systems, and sampling systems without purges, have no other obligations under this section.

(5) Open-ended valves or lines shall be operated in accordance with the standard at 63.1255(d). 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, or during maintenance or repair.

(B) The cap, blind flange, plug or second valve shall be in place and closed within one hour of cessation of operations requiring fluid flow through the open-ended valve or line, or maintenance or repair. No records are required to document compliance with this provision.

(C) If a second valve is used, the valve on the process fluid end shall be closed before the other valve is closed.

(D) If a double block and bleed arrangement is used, the bleed valve may remain open during operations requiring venting the line between the block valves, but shall be closed otherwise in accordance with E.1.1 (d)(5)(B).

(E) 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 E.1.1 (d)(5)(A) through (C).

(F) Open-ended valves or lines containing materials, which would autocatalytically polymerize are not required to comply with E.1.1 (d)(5)(A) through (C).

(G) 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 E.1.1 (d)(5)(A) through (C).

(6) Valves in gas/vapor and light liquid service shall be operated in accordance with the standard at 63.1255(e). This section provides, generally and in part:

(A) Valves shall undergo periodic monitoring.

(B) Each monitoring period shall be determined by a calculation based on the percentage of leaking valves measured in prior monitoring periods.

(C) Valves may be placed into subgroups for periodic monitoring purposes, and may be reassigned among subgroups.

(D) After a leaking valve is repaired, it shall be monitored again within 3 months after repair. This monitoring may be considered part of the periodic monitoring, or may, if conducted prior to the periodic monitoring, be considered separately from the periodic monitoring data in determining percent leaking valves for the monitoring period.

(7) Closed-vent systems and control devices used to comply with LDAR shall be operated in accordance with the standard at 63.1255(b)(4)(ii). Operation of these systems, in conformance with Sections D.9, D.14, or D.15, shall constitute compliance with these requirements;

(8) Agitators in gas/vapor and light liquid service shall be operated in accordance with the standard at 63.1255(c); This section provides, generally and in part:

(A) Single seal agitators shall undergo periodic monitoring and visual inspections.

(B) Dual mechanical seal agitators shall meet design, operation, inspection, and alarm requirements.

(C) Agitators designed without a shaft penetrating the pump housing are not required to be inspected or monitored.

(D) Agitators equipped with a closed-vent system limitable 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.

(9) Pumps, valves, connectors, and agitators in heavy liquid service, instrumentation systems, and pressure relief devices in liquid service shall be operated in accordance with the standard at 63.1255(b)(3), which requires compliance with 63.169. 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 component meets any of the following:

(i) The visual, audible, or olfactory evidence has been eliminated;

(ii) No bubbles are observed at potential leak sites during a leak check using soap solutions; or

(iii) The system will hold a test pressure.

(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.

(10) Connectors in gas/vapor and light liquid service shall be operated in accordance with the standard at 63.1255(b)(4)(iii). This section provides, generally and in part:

(A) Connectors shall undergo periodic monitoring.

(B) Each monitoring period shall be determined by a calculation based on the percentage of leaking connectors measured in prior monitoring periods.

(C) Nonrepairable connectors may not be counted in monitoring period calculations. C_{AN} shall be set to zero in the percent leaking connector calculation.

(D) Inaccessible, ceramic, or ceramic-lined connectors are not required to be monitored, and are exempt from record keeping and reporting. If they are observed to be leaking, they shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except if delay of repair applies. There is no obligation to make a first attempt at repair within 5 days.

(E) Connectors that are not required to be monitored are not included in the calculation of the percentage of leaking connectors.

(F) An optional credit may be taken for removed connectors where the weld meets certain testing requirements.

(e) As an alternative to complying with E.1.1(d), except E.1.1(d)(7), BPM process system components may comply with 63.1255(b)(4)(iv), which incorporates by reference 63.178(b) (Alternative Means of Emission Limitation: Batch Processes) as follows:

(1) Components shall be pressure tested each time the equipment is reconfigured for production of a different product or intermediate or at least once per calendar year, whichever is more stringent. The pressure testing shall be conducted in accordance with 63.180(f) or (g); and

(2) Components must comply with the leak repair requirements before startup of a process as described in 63.178(b)(4).

(f) As an alternative to complying with E.1.1 (d), except E.1.1 (d)(7), BPM process system components may comply with.179 (Alternative means of emission limitation: Enclosed-vented process units), which requires that process units be enclosed in such a manner that all emissions from equipment leaks are vented through a closed-vent system to a control device. The enclosure is to be maintained under a negative pressure at all times while the process unit is in operation to ensure that all emissions are routed to the control device. The closed vent system and control device must comply with E.1.1 (d)(7).

(g) 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 and leak repair requirements in E.1.1 (d) shall apply for this purpose. All leaks shall be marked as provided in 63.1255(a)(10).

(h) 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 1255(b)(4)(i), which incorporates by reference 63.171. This shall not affect repair periods under Conditions E.1.1 (d)(3) or (e). 63.1255(b)(4)(i) 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 scheduled process unit shutdown.

(2) Delay of repair for equipment for which leaks have been detected is allowed if the owner or operator determines that repair personnel would be exposed to an immediate danger if attempting to repair without a process shutdown. Such repair shall occur by the end of the next scheduled process shutdown.

(3) 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.

(4) Delay of repair for valves, connectors, and agitators will be allowed if emissions immediate repair 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.

(5) Delay of repair for pumps will be allowed if the repair requires the use of a dual mechanical seal system, or a pump designed without an externally actuated shaft penetrating the pump housing, or ducting of the pump fugitive emissions to a closed vent system and control device, and is completed within 6 months.

(6) 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.

(i) Alternative means of emission limitations not already included in 63.1255 may be approved in accordance with 63.1255(b)(3), which incorporates by reference 63.177.

E.1.2 Exceptions to LDAR Standards for BPM Process System Components

(a) The following facilities are not subject to the LDAR standards under this section of the permit:

(1) Research and development facilities, activities and equipment (40 CFR 63.1250(d)) not subject to BACT or construction permit requirements;

(2) Condition E.1.2(a)(2) was deleted pursuant to Administrative Permit Amendment 157-20003-00006.;

(3) Utilities and non-process lines (40 CFR 63.1255(a)(5));

(4) Bench scale processes (40 CFR 63.1255(a)(6));

(5) Equipment in vacuum service (40 CFR 63.1255(a)(8));

(6) Waste components (covered by Section E.2 of this permit).

(7) Fermented Products operations;

(8) Equipment in VOHAP/VOC service but that is in such service less than 300 hours per calendar year (40 CFR 63.1255(a)(9));

(9) Closed loop heat exchange systems (40 CFR 63.1255(a)(5)); and

(10) Welded fittings (40 CFR 63.1251).

(b) Equipment that is designated as unsafe to monitor, unsafe to inspect, difficult to monitor, difficult to inspect, or inaccessible shall comply with 63.1255(f). This section provides, generally, that accessible equipment shall be monitored according to a written plan that provides for monitoring as often as practicable, considering safety concerns, but not more often than otherwise applicable. Inaccessible equipment is not required to be routinely monitored at any time, although any observed leaks must be repaired within 15 days.

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

E.1.3 Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)]

(a) Records shall be kept in accordance with 63.1255(g), including but not limited to:

(1) Identification of components that are 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 since the last monitoring period, and

(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) Records of visual inspections;

(9) Records of leaks detected, repair information, and delays of repair;

(10) Records of pressure tests, the test pressure, and the pressure drop observed during the test;

(11) Records of compressor and relief device compliance tests;

(12) Records for closed-vent systems and control devices subject to E.1.1(d)(7);

(13) For components in heavy liquid service, records demonstrating that they are in heavy liquid service;

(14) Identification of components exempt because they are in VOHAP/VOC service for less than 300 hours per year; and

(15) Records of alternative means of compliance determination.

(b) Condition E.1.3(b) was deleted pursuant to Administrative Permit Amendment 157-20003-00006.

(c) Reporting requirements shall be conducted in accordance with 63.1255(h), including:

(1) LDAR Periodic Reports shall cover the monitoring periods from January 1 to June 30, and July 1 to December 31, respectively. Reports shall be submitted 30 days following the 6-month monitoring 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:

(A) For equipment not complying via the alternative standard, the Permittee shall report the following information for pumps, valves, agitators, and connectors subject to periodic LDAR monitoring:

(i) Number of leaks detected and percent leakers;

(ii) Number of leaks not repaired within the required timeframe;

(iii) An explanation of any delay of repairs;

(iv) Notice of a change to monthly monitoring for either pumps or valves, if applicable; and

(v) Notification of a change in connector monitoring alternatives, if applicable.

(B) Results of all monitoring required for applicable compressors, pressure relief devices in gas/vapor service, and closed-vent systems;

(i) Number of leaks not repaired within the required timeframe; and

(ii) An explanation of any delay of repairs.

(C) For equipment complying via the alternative standard at 1255(b)(4)(iv), the Permittee shall report the following information for each product process equipment train:

(i) Number of pressure tests conducted;

(ii) Number of instances where the equipment failed either a retest or 2 consecutive pressure tests;

(iii) Facts that explain any delay of repairs; and

(iv) Results of all monitoring to determine compliance for closed-vent systems used to comply with this section of the permit.

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

E.1.4 Modifications and Construction: Advance Approval of Permit Conditions

(a) The Permittee may modify any existing components 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.

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SECTION E.2 LEAK DETECTION AND REPAIR (LDAR) CONDITIONS FOR BPM 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 BPM 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 BPM waste system components are located from the point of generation (POG) or point of determination (POD), as applicable, to the last component prior to entering the hazardous waste combustor or being loaded onto tankers for transport offsite. The closed-vent systems not used to control emissions from LDAR components are not subject to the conditions of this section, but instead are subject to the conditions in Sections D.10, D.14, and D.15.

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

E.2.1 LDAR Standards for BPM Waste System Components [40 CFR 63.691, 326 IAC 8-5-3(b)(6), 326 IAC 2-2, CP157-4148 (Revised by this permit)]

Except as provided in Condition E.2, the following LDAR standards satisfy the requirements of the Volatile Organic Liquid Storage Vessel Standards [40 CFR 60.110b], Offsite Waste and Recovery Operations (OSWRO) MACT Standards [40 CFR 63.691], Best Available Control Technology (BACT) requirements [326 IAC 2-2-3], Reasonably Available Control Technology (RACT) LDAR requirements for synthesized pharmaceutical manufacturing operations [326 IAC 8-5-3(b)(6)], and construction permit [CP157-4148] requirements for LDAR components associated with the research and development operations in Building T71:

(a) The Permittee shall implement the LDAR program under 40 CFR 61 Subpart V for all BPM waste system component types listed in item (a) of the facility description section from the point of determination (POD) or at the exit of the pharmaceutical manufacturing process unit (PMPU) to the last piece of regulated equipment prior to entering the hazardous waste combustor or loaded onto tankers for transport offsite.

(b) Existing BPM waste system components in VOC/VOHAP service are covered under 40 CFR 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 61.243-3. Monitoring periods are calendar periods as defined at 40 CFR 61 Subpart V and 40 CFR 264 and 265, Subpart BB.

(c) Each new or changed BPM 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 BPM 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 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 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 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 limitable 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 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.

(3) Pressure relief devices in gas/vapor service shall be operated in accordance with the standard at 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 is 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 limitable 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 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;

(ii) Collect and recycle the purged process fluid;

(iii) Be designed and operated to capture and transport the purged process fluid to a control device;

(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; or

(v) In-situ sampling systems, and sampling systems without purges, have no other obligations under this section.

(5) Open-ended valves or lines shall be operated in accordance with the standard at 61.242-6. This section provides, generally and in part:

(A) Each open-ended valve and line shall be equipped with a limit, 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, or during maintenance or repair.

(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 may remain open during operations requiring venting the line between the block valves, but shall be closed otherwise in accordance with 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 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 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 E.2.1 (d)(5)(A) through (C).

(6) Valves shall be operated in accordance with the standard at 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 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 61.242-11, as may be applicable. Operation of these systems in conformance with Sections D.9, D.14 or D.15 shall constitute compliance with these requirements.

(9) As an alternative to complying with E.2.1 (d)(6), above, valves may comply with the alternative standards for valves-allowable percentage of valves leaking under 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, and

(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 E.2.1 (d)(6), above, with respect to monitoring requirements alone, valves may comply with the alternative standards for valves-skip period leak detection and repair under 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 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, upon 90 days' advance notice to the Administrator, the designated process unit may begin to skip one of the quarterly monitoring periods.

(C) After 5 consecutive quarterly monitoring periods with the percent leaking valves in the process unit at less than or equal to 2.0 percent, upon notice to the Administrator, the designated process unit may begin to skip three of the quarterly monitoring periods.

(D) 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 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 E.2.2 (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:

(A) 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.

(B) 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.

(C) Delay of repair for valves will be allowed if emissions immediate repair 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.

(D) 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.

(E) 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 61, Subpart V may be approved in accordance with 40 CFR 61.242-1(d) and 61.244

E.2.2 Exceptions to LDAR Standards for BPM Waste System Components

The following equipment types are not subject to the LDAR standards described in 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 63, Subpart DD);

(c) BPM process systems including non-waste storage and process operations (covered by Section E.1 of this permit);

(d) Utilities and non-process lines;

(e) Components in vacuum service (40 CFR 61.242-1);

(f) Equipment in VOC/VOHAP service 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 [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.2.3 Record Keeping and Reporting Requirements

(a) Records shall be kept in accordance with 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 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 recordkeeping systems, providing each record is identified by process unit.

(b) Condition E.2.3(b) was deleted pursuant to Administrative Permit Amendment 157-20003-00006.

(c) Reporting requirements shall be conducted in accordance with 61.247, including:

(1) 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.

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 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 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 areas of the plant site listed below are subject to the change management and flexible permit conditions described in this F 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.6 BPM - Process Operations [referred to as "BPM"]
(2) D.7 BPM Support – Solvent Recovery Operations
(3) D.8 BPM Support – Individual Drain Systems
(4) D.9 BPM Support – Solvent Storage Tank Operations
(5) D.10 BPM Support – Waste Storage Tank Operations
(6) D.11 BPM Support – Waste Containers
(7) D.12 BPM Control Systems – T49 Liquid Waste Incinerator
(8) D.13 BPM Control Systems – T149 Solids-Liquid Waste Incinerator
(9) D.14 BPM Control Systems – RTO Operations
(10) D.15 BPM Control Systems – T79 Fume Incinerator Operations

(b) The following operation is not subject to the change management provisions of this section except for the VOC emission limit requirements in Sections F.1.1(e) and F.1.7(c):

(1) D.18 BPM Support – Chemical Wastewater Treatment Plant

(c) The operations in the areas listed below are not subject to the change management and flexible permit conditions in this G section:

(1) D.1 Utilities
(2) D.2 Utilities Support
(3) D.3 – D.5 Fermented Products
(4) D.16 Research and Development Operations
(5) D.19 BPM Transfer Activities
(6) Insignificant Activities described in Section A and outside the BPM production and support operations

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 150 tons per 12-month period, rolled on a calendar month basis. Carbon monoxide emissions from the T79 fume incinerators shall not exceed 30 tons per 12-month period, rolled on a calendar month basis.

(b) Fluoride (F) emissions from the facilities operating under the flexible permit conditions shall not exceed 6 tons per 12-month period, rolled on a calendar month basis. Fluoride emissions from the T79 fume incinerators shall not exceed 2 tons per 12-month period, rolled on a calendar month basis.

(c) Nitrogen oxides (NOx) 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. Nitrogen oxide emissions from the T79 fume incinerators shall not exceed 30 tons per 12-month period, rolled on a calendar month basis.

(d) Sulfur dioxide (SO_2) 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. Sulfur dioxide emissions from the T79 fume incinerators shall not exceed 5 tons per 12-month period, rolled on a calendar month basis.

(e) Volatile organic compounds (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.6 through D.15 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) BPM Process Operations:

(A) A change in bulk pharmaceutical products or intermediate products manufactured;
(B) A change in raw materials stored and utilized;
(C) A change in the method of operation to a process or existing equipment;
(D) Piping changes, including but not limited to, process piping, waste piping and fume transport piping;
(E) A physical change to existing equipment;
(F) Reconstruction or replacement of existing equipment, including but not limited to, process tanks, crystallizers, distillation operations, filters, centrifuges, and dryers;
(G) Installation of new equipment, including but not limited to, process tanks, crystallizers, distillation operations, filters, centrifuges, and dryers;
(H) Reconstruction or replacement of existing production buildings; and

(2) BPM Support Operations:

(A) A change in solvent material recovered;
(B) A change in raw materials stored and utilized;
(C) A change in the method of operation to a process or existing equipment;
(D) Piping changes, including but not limited to, process piping, waste piping and fume transport piping;
(E) A physical change to existing equipment;
(F) Reconstruction or replacement of existing equipment, including but not limited to, process tanks, receivers, stills, storage tanks, and container transfer operations;
(G) Installation of new equipment, including but not limited to, process tanks, receivers, stills, storage tanks, and container transfer operations;
(H) Reconstruction or replacement of existing solvent recovery operations, storage tanks, storage tank modules, and distillation operations; and

(3) T49 liquid waste incinerator and T149 solids-liquid waste incinerator:

(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 63, Subpart EEE;
(D) Piping changes;
(E) A physical change that does not affect compliance with 40 CFR 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, compliance demonstration requirements, compliance 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.6 through D.15 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 must 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.

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

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, the T49 liquid waste incinerator, and the T149 solids-liquid waste incinerator:

(1) **CO measurement**: The Permittee shall measure CO concentration in the exhaust of with a CO continuous emission monitoring system (CEMS) that meets the requirements of 40 CFR Part 60, Appendix B and 326 IAC 3.

(2) **Flow rate measurement**: The Permittee shall measure the actual exhaust gas flow rate from the RTOs and T149 solids-liquid waste incinerator, and measure the combustion and atomized air flow rate into the T49 liquid waste incinerator.

(3) **Mass emission calculation**: The Permittee shall calculate CO emissions, in tons, each calendar month by using the CEMS data and flow rate data.

(4) **Minimum data collection requirements:**

(A) For the RTOs, the Permittee shall monitor and record CO concentrations as required in Section D.14.

(B) For the T49 liquid waste incinerator, the Permittee shall monitor and record CO concentrations as required in Section D.12.

(C) For the T149 solids-liquid waste incinerator, the Permittee shall monitor and record CO concentrations as required in Section D.13.

(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 for the RTO and T149 CEMS, and the last valid one-minute CO emission rate measurement obtained prior to the calibration in lieu of actual readings from the CO CEMS for the T49 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, repair, or other periods of invalid CO data collection, the Permittee shall substitute the following data in lieu of actual readings from the CO CEMS:

(i) When combusting only natural gas, the following CO mass emission rates shall be substituted:

(1) RTO CO mass emission rate = 0.05 lb/min
(2) T49 CO mass emission rate = 0.10 lb/min
(3) T149 CO mass emission rate = 0.07 lb/min

(ii) When incinerating a waste stream, the following CO concentrations shall be substituted:

(1) RTO CO concentration = 73 ppmv
(2) T49 CO concentration = 100 ppmv
(3) T149 CO concentration = 100 ppmv

(D) During periods of flow meter maintenance, malfunction, repair, or other periods of invalid exhaust gas flow rate data collection, the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the following CO mass emission rates shall be substituted:

(1) RTO CO mass emission rate = 0.05 lb/min
(2) T49 CO mass emission rate = 0.10 lb/min
(3) T149 CO mass emission rate = 0.07 lb/min

(ii) When incinerating a waste stream, the following exhaust gas flow rates shall be substituted:

(1) RTO exhaust gas flow rate = 93,000 scfm
(2) T49 exhaust gas flow rate = 17,735 dscfm
(3) T149 exhaust gas flow rate = 14,340 dscfm

(6) **Emissions during RTO bypass periods**: When determining compliance with the CO emission limit, the Permittee shall include any known CO emissions from BPM production buildings not emitted through the RTO due to diversions at 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 T79 fume incinerators (309 and 310):

(1) **Natural gas usage**: The Permittee shall determine the amount of natural gas burned by the T79 fume incinerators each calendar month.

(2) **Emission calculation**: The Permittee shall calculate CO emissions, in tons, each calendar month by multiplying the monthly natural gas usage, in mmscf, by an emission factor of 84 lbs/mmscf and converting the resulting emissions to tons.

(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 T79 fume incinerators are not collecting valid data, the Permittee shall substitute a natural gas consumption rate for each incinerator of 0.0075 mmscf/hour [based on the nominal heat input rate of 7.626 MMBtu/hr per incinerator].

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 T79 fume incinerators:

(1) **Uncontrolled hydrogen fluoride emissions**: The Permittee shall determine the mass of fluorine atoms emitted to the RTOs and T79 fume incinerators [as components of fluorinated solvents] by BPM and BPM 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 T79 fume incinerators.

(2) **HF control efficiency:** The Permittee shall base fluoride emissions on an RTO and T79 scrubber control efficiency of 98% or a control efficiency determined from an approved stack test. If the compliance 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 fluoride emissions, in tons, for each calendar month by multiplying the amount of HF created by combustion of the fluorine atoms in the RTOs and T79 fume incinerators by the respective HF control efficiency.

(4) **Emissions during RTO bypass periods**: When determining compliance with the fluoride emission limit, the Permittee shall include any known fluoride emissions from BPM production buildings not emitted through the RTO due to diversions at the fume transport system. The Permittee may use engineering calculation methods based on ideal gas law equations, stoichiometry, and mass balance, to estimate these emissions.

(b) The following requirements apply to the T49 liquid waste incinerator and the T149 solids-liquid waste incinerator:

(1) **Uncontrolled hydrogen fluoride emissions**: When burning liquid wastes, the Permittee shall determine the mass of fluorine atoms burned in the incinerators by sampling the liquid waste and analyzing the sample for fluorine content, no less frequently than once per quarter. All fluorine atoms shall be considered emitted as hydrogen fluoride (HF). When burning solid wastes in the T149 solids-liquid waste incinerator, the Permittee shall determine monthly HF

emissions by multiplying an emission factor of 0.149 pounds/ton solid waste burned by the monthly solid waste throughput.

(2) **HF control efficiency:** The Permittee shall base fluoride emissions on an incinerator scrubber control efficiency of 98.0% or a control efficiency determined from an approved stack test. If the compliance 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 fluoride emissions, in tons, for each calendar month by multiplying the amount of uncontrolled HF emissions by the 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, the T49 liquid waste incinerator, and the T149 solids-liquid waste incinerator:

(1) **NOx measurement**: The Permittee shall measure NOx concentration in the exhaust of with a NOx continuous emission monitoring system (CEMS) in accordance with the requirements of 40 CFR Part 60, Appendix B and 326 IAC 3.

(2) **Flow rate measurement**: The Permittee shall measure the actual exhaust gas flow rate from the RTOs and T149 solids-liquid waste incinerator, and measure the combustion and atomized air flow rate into the T49 liquid waste incinerator with a system.

(3) **Emission calculation**: The Permittee shall calculate NOx emissions, in tons, each calendar month by using the CEMS 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 NOx concentration measurement obtained prior to the calibration in lieu of actual readings from the NOx CEMS for the RTO and T149 CEMS, and the last valid one-minute NOx emission rate measurement obtained prior to the calibration in lieu of actual readings from the NOx CEMS for the T49 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, repair, or other periods of invalid NOx data collection, the Permittee shall substitute the following data in lieu of actual readings from the NOx CEMS:

(i) When combusting only natural gas, the following NOx mass emission rates shall be substituted:

(1) RTO NOx mass emission rate = 0.03 lb/min
(2) T49 NOx mass emission rate = 0.12 lb/min
(3) T149 NOx mass emission rate = 0.08 lb/min

(ii) When incinerating a waste stream, the following NOx concentrations shall be substituted:

(1) RTO NOx concentration = 91 ppmv
(2) T49 NOx concentration = 975 ppmvdc
(3) T149 NOx concentration = 170 ppmvdc

(D) During periods of flow meter maintenance, malfunction, repair, or other periods of invalid exhaust gas flow rate data collection, the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the following NOx mass emission rates shall be substituted:

(1) RTO NOx mass emission rate = 0.03 lb/min
(2) T49 NOx mass emission rate = 0.12 lb/min
(3) T149 NOx mass emission rate = 0.08 lb/min

(ii) When incinerating a waste stream, the following exhaust gas flow rates shall be substituted:

(1) RTO exhaust gas flow rate = 93,000 scfm
(2) T49 exhaust gas flow rate = 17,735 dscfm
(3) T149 exhaust gas flow rate = 14,340 dscfm

(5) **Minimum data collection requirements:**

(A) For the RTOs, the Permittee shall monitor and record NOx concentrations as required in Section D.14.
(B) For the T49 liquid waste incinerator, the Permittee shall monitor and record NOx concentrations as required in Condition D.12.
(C) For the T149 solids-liquid waste incinerator, the Permittee shall monitor and record NOx concentrations as required in Section D.13.

(6) **Emissions during RTO bypass periods**: When determining compliance with the NOx emission limit, the Permittee shall include any known NOx emissions from BPM production buildings or storage tank modules 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 T79 Fume Incinerators:

(1) **NOx emission calculation for natural gas usage:** The Permittee shall determine the amount of natural gas burned by the T79 Fume Incinerators each calendar month. The Permittee shall calculate NOx emissions from natural gas combustion, in tons, each calendar month by multiplying the monthly natural gas usage by an emission factor of 50 lbs/mmscf and converting the resulting emissions to tons.

(2) **NOx emission calculation for combustion of nitrogen-containing solvents**: The Permittee shall determine the mass of nitrogen atoms emitted to the T79 fume incinerators [as components of solvents containing nitrogen] by the BPM Support operations by using engineering calculations based on ideal gas law equations, stoichiometry, or mass balance. Six (6%) of the nitrogen atoms shall be considered emitted as nitrogen oxides after combustion in the T79 fume incinerators.

(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 T79 fume incinerators are not collecting valid data, the Permittee shall determine NOx emissions based on a natural gas consumption rate of 0.0075 mmscf/hour [based on the nominal heat input rate of 7.626 MMBtu/hr per incinerator].

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 RTOs, the T49 liquid waste incinerator, and the T149 solids-liquid waste incinerator:

(1) **SO_2 measurement**: The Permittee shall measure SO_2 concentration in the exhaust of RTO, and incinerators with a SO_2 continuous emission monitoring system (CEMS) that meets the requirements of 40 CFR Part 60, Appendix B and 326 IAC 3.

(2) **Flow rate measurement**: The Permittee shall measure the actual exhaust gas flow rate from the RTOs and the T149 solids-liquid waste incinerator, and measure the combustion and atomized air flow rate into the T49 liquid waste incinerator.

(3) **Emission calculation**: The Permittee shall calculate SO_2 emissions, in tons, each calendar month by using the CEMS 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 for the RTO and T149 CEMS, and the last valid one-minute SO_2 emission rate measurement obtained prior to the calibration in lieu of actual readings from the SO_2 CEMS for the T49 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, repair, or other periods of invalid SO_2 data collection, the Permittee shall substitute the following data in lieu of actual readings from the SO_2 CEMS:

(i) When combusting only natural gas, the following SO_2 mass emission rates shall be substituted:

(1) RTO SO_2 mass emission rate = 0.0004 lb/min
(2) T49 SO_2 mass emission rate = 0.0007 lb/min
(3) T149 SO_2 mass emission rate = 0.0005 lb/min

(ii) When incinerating a waste stream, the following SO_2 concentrations shall be substituted:

(1) RTO SO_2 concentration = 100 ppmv
(2) T49 SO_2 Concentration = 500 ppmv
(3) T149 SO_2 concentration = 400 ppmv

(D) During periods of flow meter maintenance, malfunction, repair, or other periods of invalid exhaust gas flow rate data collection, the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the following SO_2 mass emission rates shall be substituted:

(1) RTO SO_2 mass emission rate = 0.0004 lb/min
(2) T49 SO_2 mass emission rate = 0.0007 lb/min
(3) T149 SO_2 mass emission rate = 0.0005 lb/min

(ii) When incinerating a waste stream, the following exhaust gas flow rates shall be substituted:

(1) RTO exhaust gas flow rate = 93,000 scfm
(2) T49 exhaust gas flow rate = 17,735 dscfm
(3) T149 exhaust gas flow rate = 14,340 dscfm

(5) **Minimum data collection requirements:**

(A) For the RTOs, the Permittee shall monitor and record SO_2 concentrations as required in Section D.14.
(B) For the T49 liquid waste incinerator, the Permittee shall monitor and record SO_2 concentrations as required in Condition D.12.
(C) For the T149 solids-liquid waste incinerator, the Permittee shall monitor and record SO_2 concentrations as required in Condition D.13.

(6) **Emissions during RTO bypass periods:** When determining compliance with the SO_2 emission limit, the Permittee shall include any known SO_2 emissions from BPM production buildings and storage tank modules 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 T79 fume incinerators:

(1) **SO_2 emission calculation for natural gas usage:** The Permittee shall determine the amount of natural gas burned by the T79 fume incinerators 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 lbs/mmscf and converting the resulting emissions to tons.

(2) **Uncontrolled SO_2 emission calculation for combustion of sulfur-containing solvents:** The Permittee shall determine the mass of sulfur atoms emitted to the T79 fume incinerators [as components of solvents containing sulfur] by the BPM Support operations by using engineering calculation methods based on ideal gas law equations, stoichiometry, or mass balance. All of the sulfur atoms shall be considered converted to SO_2 as a result of combustion in the T79 fume incinerators.

(3) **SO_2 control efficiency:** The Permittee shall base SO_2 emissions on T79 scrubber control efficiency of 95%. If the compliance 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%).

(4) **Emission calculation:** The Permittee shall calculate SO_2 emissions, in tons, each calendar month by multiplying the amount of SO_2 created by combustion of the sulfur atoms in the T79 fume incinerators by the scrubber SO_2 control efficiency.

(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 T79 fume incinerators are not collecting data properly, the Permittee shall determine SO_2 emissions based on a natural gas consumption rate of 0.0075 mmscf/hour [based on the nominal heat input rate of 7.626 MMBtu/hr per incinerator].

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, the T49 liquid waste incinerator, and the T149 solids-liquid waste incinerator:

(1) **VOC measurement:**

(A) For the RTO operations, the Permittee shall directly measure TOC concentration, as methane**,** in the exhaust gas using a TOC continuous emission monitoring system (CEMS) that meets the requirements of 40 CFR Part 63. The Permittee shall assume VOC, a subset of total organic compounds (TOC), is equal to TOC.

(B) For the T49 liquid waste incinerator and the T149 solids-liquid waste incinerator, the Permittee shall use 10 ppmdvc methane or shall use the highest hourly rolling average HC level achieved during the DRE test runs as the TOC concentration in the exhaust gas, as long as the CO concentration, as measured by the CO CEMS, is less than 100 ppmvdc, averaged over a rolling hourly period. VOC, a subset of total organic compounds (TOC), shall be equal to TOC.

(2) **Flow rate measurement:** The Permittee shall measure the actual exhaust gas flow rate from the RTOs and the T149 solids-liquid waste incinerator, and measure the combustion and atomized air flow rate into the T49 liquid waste incinerator.

(3) **Emission calculation**: The Permittee shall calculate VOC emissions, in tons, each calendar month by using the TOC CEMS concentration data, measured as methane (MW = 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/CO concentration measurement obtained prior to the calibration in lieu of actual readings from the TOC/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, repair, or other periods of invalid TOC/CO data collection, the Permittee shall substitute the following data in lieu of actual readings from the TOC/CO CEMS:

(i) When combusting only natural gas, the following VOC mass emission rates shall be substituted:

(1) RTO VOC mass emission rate = 0.003 lb/min
(2) T49 VOC mass emission rate = 0.007 lb/min
(3) T149 VOC mass emission rate = 0.004 lb/min

(ii) When incinerating a waste stream, the following TOC concentrations shall be substituted:

(1) RTO TOC concentration = 20 ppmv methane
(2) T49 TOC concentration = 10 ppmv methane
(3) T149 TOC concentration = 10 ppmv methane

(D) During periods of flow meter maintenance, malfunction, repair, or other periods of invalid exhaust gas flow rate data collection, the Permittee shall substitute the following data in lieu of actual readings from the flow meter:

(i) When combusting only natural gas, the following VOC mass emission rates shall be substituted:

(1) RTO VOC mass emission rate = 0.003 lb/min
(2) T49 VOC mass emission rate = 0.007 lb/min
(3) T149 VOC mass emission rate = 0.004 lb/min

(ii) When incinerating a waste stream, the following exhaust gas flow rates shall be substituted:

(1) RTO exhaust gas flow rate = 93,000 scfm
(2) T49 exhaust gas flow rate = 17,735 dscfm
(3) T149 exhaust gas flow rate = 14,340 dscfm

(5) **Minimum data collection requirements:**

(A) For the RTOs, the Permittee shall monitor and record VOC concentrations as required in condition D.14.

(B) For the T49 liquid waste incinerator, the Permittee shall monitor and record VOC concentrations as required in condition D.12.

(C) For the T149 solids-liquid waste incinerator, the Permittee shall monitor and record VOC concentrations as required in D.13.

(6) **Emissions during RTO bypass periods:** The Permittee shall include any known VOC emissions from BPM production buildings 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 and the T79 fume incinerators:

(1) **VOC emission calculation for natural gas usage:** The Permittee shall determine the amount of natural gas burned by the RTOs and the T79 fume

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 lbs/mmscf and converting the resulting emissions to tons.

(2) **VOC emission calculation from BPM production operations and BPM support operations exhausting to the RTOs and the T79 fume incinerator system:** The Permittee shall estimate the uncontrolled VOC emissions from the BPM production operations and the BPM support operations exhausting to the RTOs and the T79 fume incinerator system by using engineering calculation methods based on ideal gas law equations, stoichiometry, or mass balance. The Permittee shall base VOC emissions on an RTO and T79 fume incinerator control efficiency of 98%. If the compliance monitoring data is not available or indicates the RTO or T79 fume incinerator 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 or T79 fume incinerator system are not collecting valid data, the Permittee may assume that natural gas is consumed at a rate of 0.0075 mmscf/hour [based on the nominal heat input rate of 7.626 MMBtu/hr per incinerator].

(c) Fugitive VOC emissions from BPM and BPM Support Operations, *including the Chemical Wastewater Treatment Plant*: 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 mass-balance 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 (1), 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 (1)(B) by the monthly solvent usage of those compounds.

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

F.1.8 Records and reporting emission limits [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) The Permittee shall record and maintain records of all information including all measurements and calculations described in Sections F.1.3 through F.1.7.

(b) The Permittee shall submit a quarterly report of actual emissions of CO, fluorides, NOx, SO_2, and VOC, as determined in accordance with Sections F.1.4 through F.1.8, to the address listed in Section C – General Reporting Requirements, within thirty (30) days after the end of the calendar quarter being reported. This report requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

F.1.9 Change management evaluation process

For purposes of the requirements of the Pharmaceutical MACT standards [40 CFR 63, Subpart GGG], the Permittee shall employ a change management evaluation process to determine whether changes will affect compliance. 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 F.1.10 (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 or changed process vents, a statement regarding the method for complying with 40 CFR 63.1254. The statement shall include an analysis that shows whether the new or changed process vents fit within an existing compliance demonstration, or whether another demonstration must be conducted.

(2) For new or changed storage tanks, a statement regarding the method for complying with 40 CFR 63.1253. The statement shall include an analysis that shows whether the new or changed storage tank fits within an existing compliance demonstration, or whether another demonstration must be conducted.

(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 BPM operations and BPM Support operations.

(2) Pursuant to 40 CFR 63.1259(f)(4), for all equipment subject to the pharmaceutical MACT requirements, the Permittee shall list all known operating scenarios that may occur in the BPM operations and BPM Support operations 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 BPM operations and BPM Support operations.

F.1.11 Notifications for site modifications [326 IAC 2-1.1-12(e)-(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 – 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 to assure compliance with the applicable 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 emissions limit.

(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 Conditions D.14.9 or D.15.8 – Reporting Requirements.

(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 Conditions D.14.9 or D.15.8 – Reporting Requirements:

(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 paragraph (f) of this section; and

(4) Information required by the Notification of Compliance Status Report under paragraph (f) of this section 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 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.

(c) 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 Tippecanoe Laboratories. The BACT requirements established in Sections D.6 through D.15 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 shall also 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 requirements (Prevention of Significant Deterioration and Nonattainment NSR) shall apply.

F.1.15 Emission increases from increased utilization of ancillary equipment [326 IAC 2-2] (Deleted)

Condition F.1.15 was deleted pursuant to Administrative Permit Amendment 157-20003-00006.

F.1.16 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.

F.1.17 Pollution Prevention Program

The Permittee shall implement a pollution prevention program as described below:

(a) The Permittee shall develop a pollution prevention strategy that describes the site's involvement and efforts to reduce the use of raw materials and reduce waste and emissions generation. The plan shall be available to IDEM upon request.

(b) The Permittee shall communicate its pollution prevention strategy to the public by conducting public outreach meetings.

Tippecanoe Laboratories will submit an annual report to IDEM describing specific pollution prevention efforts that took place during the calendar year. The report shall include an estimate of the air emission, wastewater, and waste reductions prevented or achieved by pollution prevention activities.

SECTION G.1 Plantwide Applicability Limitations Requirements

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

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

The entire plant site is subject to the plantwide applicability limitations [PAL] requirements described in this G section.

Source wide emission limits [326 IAC 2-2.4-7(1)]

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

(a) Nitrogen oxides (NOx) emissions from the entire source shall not exceed 648 tons per 12 consecutive month period with compliance determined at the end of each month. This provision does not supersede any other NOx emission limits contained in this permit.

(b) Sulfur dioxide (SO_2) emissions from the entire source shall not exceed 2059 tons per 12-consecutive month period, with compliance determined at the end of each month. This provision does not supersede any other SO_2 emission limits contained in this permit.

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

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

Any physical change in or change in the method of operation of this source is not a major modification for NOx or SO_2, and not subject to the review requirements of 326 IAC 2-2 provided the actual emissions of NOx and SO_2 from the entire source do not exceed the emission limits in Condition G.1.1 of this permit. This provision does not supersede or affect the Flexible Permit requirements in Section F of this permit.

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

(a) The requirements of this section G become effective on the issuance date of the PAL permit, and expire ten years after the issuance date of the PAL permit.

(b) If the Permittee applies to renew this PAL at least six months prior to expiration of the PAL, but no earlier than eighteen months prior to the expiration of the PAL, then notwithstanding the expiration date in subsection G.1.3(a), the PAL shall continue to be effective until the revised permit with the renewed PAL is issued. The application must contain the elements described in 326 IAC 2-2.4-3 and 326 IAC 2-2.4-10.

(c) Once this PAL expires, if not otherwise renewed, then the requirements of 326 IAC 2-2.4-9 are applicable.

(d) The requirements for renewing this PAL are described in 326 IAC 2-2.4-10.

(e) The requirements for increasing the emissions limits described in Condition G.1.1 are described in 326 IAC 2-2.4-11.

(f) The requirements applicable to terminating or revoking this PAL are described in 326 IAC 2-2.4-15.

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

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

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

(a) The Permittee shall calculate NOx emissions from Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by a NOx emission factor of 16 lb NOx/ton of coal burned.

(b) The Permittee shall calculate NOx emissions from burning natural gas in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NOx emission factor of 280 lb NOx/million cubic feet of natural gas burned in Boiler 4 and 100 lb NOx/million cubic feet of natural gas burned in Boiler 5.

(c) The Permittee shall calculate NOx emissions from burning fuel oil in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by an NOx emission factor of 24 lb NOx/1000 gallons of fuel oil burned in Boiler 4 and 20 lb NOx/1000 gallons of fuel oil burned in Boiler 5.

(d) The Permittee shall determine NOx emissions from diesel engines, in tons, each calendar month, through one of the methods described in (1) and (2) below. The Permittee shall identify which method it used when it reports emissions pursuant to Condition G.1.8.

(1) **Potential to emit method**: The Permittee shall use the following values, which represent the NOx potential to emit of the diesel engines, as the actual emissions:

(A) For the T121 1250 KW diesel electrical generator – 1.5 ton/month [18.1 ton/yr].

(B) For the T5 380 HP diesel emergency generator – 0.2 ton/month [2.9 ton/yr]

(C) For the T62 1100 KW diesel emergency generator – 0.7 ton/month [8.9 ton/yr].

(D) For the T135 390 HP diesel emergency generator – 0.3 ton/month [3.0 ton/yr].

(E) For the T78 58 KW diesel compressor engine – 0.9 ton/month [10.6 ton/yr]

(F) For the T89-1 KW diesel compressor engine – 0.9 ton/month [10.6 ton/yr].

(G) For the T89-2 KW diesel compressor engine – 0.9 ton/month [10.6 ton/yr].

(2) **Actual hours of operation method:** The Permittee shall calculate NOx emissions from diesel engines by multiplying the actual hours of operation per calendar month for each diesel engine by the engine's horsepower rating and by an NOx emission factor of 0.024 lb NOx/brake horsepower-hour for diesel engines greater than 600 brake horse power and 0.031 lb NOx/brake horsepower-hour for diesel engines smaller than 600 brake horse power

(e) The Permittee shall calculate NOx emissions from the T174 Thermal Research Incinerator, in tons, each calendar month, by multiplying the actual hours of operation of the incinerator for each month by a NOx emission factor of 2.5 lb NOx/hour of operation.

(f) The methods for determining monthly NOx emissions from the T49 Incinerator, the T149 Incinerator, the RTOs, and the T79 Fume Incinerators are described in Condition F.1.5 of this permit.

(g) NOx emissions from the T71 Pilot Plant are equivalent to the potential to emit for this facility – 0.1 ton/yr.

(h) When determining actual annual emissions of NOx, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

G.1.5 Sulfur dioxides (SO_2) emission limit determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of SO_2 by employing the following techniques:

(a) The Permittee shall calculate SO_2 emissions from Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by an SO_2 emission factor of 38*S lb SO_2/ton of coal burned, where S = the percent sulfur content of the coal as determined by Condition D.1.7. In addition, the Permittee shall calculate the SO_2 emissions from burning natural gas in Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an SO_2 emission factor of 0.6 lb SO_2/million cubic feet of natural gas burned.

(b) The Permittee shall calculate SO_2 emissions from burning natural gas in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an SO_2 emission factor of 0.6 lb SO_2/million cubic feet of natural gas burned.

(c) The Permittee shall calculate SO_2 emissions from burning fuel oil in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by an SO_2 emission factor of 69.6 lb SO_2/1000 gallons of fuel oil burned.

(d) The Permittee shall determine SO_2 emissions from diesel engines, in tons, each calendar month, through one of the methods described in (1) and (2) below. The Permittee shall identify which method it used when it reports emissions pursuant to Condition G.1.8.

(1) Potential to emit method: The Permittee shall use the following values, which represent the SO_2 potential to emit of the diesel engines, as the actual emissions:

(A) For the T121 1250 KW diesel electrical generator – 0.25 ton/month [3.0 ton/yr].

(B) For the T5 380 HP diesel emergency generator – 0.02 ton/month [0.2 ton/yr]

(C) For the T62 1100 KW diesel emergency generator – 0.1 ton/month [1.5 ton/yr].

(D) For the T135 390 HP diesel emergency generator – 0.02 ton/month [0.2 ton/yr].

(E) For the T78 58 KW diesel compressor engine – 0.06 ton/month [0.7 ton/yr].

(F) For the T89-1 KW diesel compressor engine – 0.06 ton/month [0.7 ton/yr].

(G) For the T89-2 KW diesel compressor engine – 0.06 ton/month [0.7 ton/yr].

(2) Actual hours of operation method: The Permittee shall calculate SO_2 emissions from diesel engines by multiplying the actual hours of operation per calendar month for each diesel engine by the engine's horsepower rating and by an SO_2 emission factor of 0.0004045 lb SO_2/brake horsepower-hour for diesel engines greater than 600 brake horse power and 0.00205 lb SO_2/brake horsepower-hour for diesel engines smaller than 600 brake horse power

(e) The Permittee shall calculate SO_2 emissions from the T174 Thermal Research Incinerator, in tons, each calendar month, by multiplying the actual hours of operation of the incinerator for each month by a SO_2 emission factor of 4.56 lb SO_2/hour of operation.

(f) The methods for determining monthly SO_2 emissions from the T49 Incinerator, the T149 Incinerator, the RTOs, and the T79 Fume Incinerators are described in Condition F.1.6 of this permit.

(g) SO_2 emissions from the T71 Pilot Plant are equivalent to the potential to emit for this facility – 1.5 ton/yr [0.125 ton/month].

(h) When determining actual annual emissions of SO_2, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

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

The Permittee shall revalidate the emissions determination methods described in Conditions G.1.4 and G.1.5 through performance testing or other scientifically valid means approved by the department no later than five years after the effective date of the PAL provisions.

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

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

(a) The Permittee shall retain a copy of all records necessary to determine compliance with the requirements of this G Section, including a determination of each emissions unit's twelve (12) month rolling total emissions, for five years from the date of the record.

(b) The Permittee shall retain a copy of the PAL permit application, any applications for revisions to the PAL, each annual compliance certification as required by Condition B.9 of this permit, and data relied on in the certification for the duration of the PAL plus five years.

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

(a) The Permittee shall submit a semi-annual report, containing the information described below, to the address listed in Section C – General Reporting Requirements, within thirty (30) days after the end of the calendar quarter being reported. This report requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). The report shall include the following information:

(1) The identification of the owner and operator of the facility and the permit number.

(2) Total emissions of NOx and SO_2, in tons per rolling 12 month period for each month in the reporting period, as determined by Conditions G.1.4 and G.1.5.

(3) All data relied upon, including but not limited to, any quality assurance or quality control data, in determining emissions.

(4) A list of any emissions units modified or added to the major stationary source during the reporting period.

(5) If not previously reported pursuant to another condition in this permit, the number, duration, and cause of any deviations or monitoring malfunctions, other than the time associated with zero and span calibration checks, and any corrective action taken.

(6) If not required to be reported pursuant to another condition in this permit, information about monitoring system shutdowns including the following information:

(A) Notification to the department of the shutdown of any monitoring system.

(B) Whether the shutdown was permanent or temporary.

(C) The reason for the shutdown.

(D) The anticipated date that the monitoring system will be fully operational or replaced with another monitoring system.

(E) Whether the emissions unit monitored by the monitoring system continued to operate.

(F) If the emission unit monitored by the monitoring system continued to operate, the calculation of the:

(i) Emissions of the pollutant; or

(ii) Number determined by method included in the permit, as provided by 326 IAC 2-2.4-12(g).

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section D.1 – Utilities Operations
Quarterly Coal Characteristic and Consumption Report

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006
Facility: Boilers 1, 2 and 3
Parameter: SO_2 emissions
Limit: 6.0 lbs/MMBtu

Quarter: _____ **Year:** _____

Month	Sulfur Content (% Wt.)	Heating Value (Btu/lb)	Coal Consumption (tons)	Emission Rate (lbs/MMBtu)

Check one of the following:

☐ No deviation occurred in this quarter.

☐ The following deviation/s occurred in this quarter.

Submitted by:_____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section D.1 – Utilities Operations
Quarterly Fuel Oil Characteristic and Consumption Report

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006
Facility: Boilers 4 and 5
Parameter: SO_2 emissions
Limit: 0.5 lbs/MMBtu

Quarter: _____ **Year:** _____

Month	Sulfur Content (% Wt.)	Heating Value (Btu/lb)	Fuel Oil Consumption (gallons)	Emission Rate (lbs/MMBtu)
Boiler 4:				
Boiler 5:				

Check one of the following:

☐ No deviation occurred in this quarter.

☐ The following deviation/s occurred in this quarter.

Submitted by:_____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section D.2 – Utilities Support Operations
Quarterly Generator Hours Report

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006
Facility: Generator T121
Parameter: NOx Emissions
Limit: T121 = 900 hrs of operation per 12 month period, rolled on a monthly basis

Quarter: _____ **Year:** _____

Month	Hours Used This Month	Hours/ 12 Months

Check one of the following:

☐ No deviation occurred in this quarter.

☐ The following deviation/s occurred in this quarter.

Submitted by:_____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section D.12-D.15 – Control Device CMS Operations
Streamlined CMS Periodic Report

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006

Quarter: _____ **Year:** _____

PART 1: CMS Exceedance Summary

Regulated Entity	CMS	Brief Description	Limits/UOM	Manufacturer/ Model #	Last Audit/ Annual Calibration Date	Description of changes in CMS/CEMS

PART 2: CMS Downtime Summary

Regulated Entity	Operating Time (days)	CMS	Exceedance Time by Cause (days)					Total Exceedance Time (days)	Exceedances (as % of Operating Time)
			Startup/ Shutdown	Control Equipment Problem	Process Problem	Other known	Other Unknown		

PART 3: 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

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 4: CMS Excursion Summary, If Applicable

Regulated Entity	Operating Time (days)	CMS	Number of Excursions	% Excursion

PART 5: CMS Excursion Details, If Applicable

Control Device: _____
CMS/CEMS: _____
Operating Time: _____

Date	Duration (days)

PART 6: Bypass Summary

Regulated Entity	Date	Start Time	Building or Fume Stream	Duration (hrs)	SSM Event?

PART 7: 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, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006

Period: _____ **Year:** _____

PART 1: LDAR Report for Process System 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

PART 2: 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
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name:	Eli Lilly and Company, Tippecanoe Laboratories
Source Address:	1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address:	1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.:	T157-6879-00006

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 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-5967), 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: _____

A certification is not required for 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, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006
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, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006

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

Please check what document is being certified:

Annual Compliance Certification Letter

Test Result (specify)_____

Report (specify) _____

Notification (specify) _____

Affidavit (specify) _____

Other (specify) _____

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

Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Sections F.1 and G.1 – Change Management and Flexible Permit Requirements, and Plantwide Applicability Limitations Requirements
Quarterly Emission Limit Report

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006
Facility: BPM Operations (RTOs, T79, T49, T149, Chemical WWTP, BPM Building Fugitives)
Parameter: BPM Operations Emission Limit for VOC, CO, NOx, SO_2, and Fluorides; T79 Fume Incinerator System Emission Sublimit for VOC
Limit:

Pollutant	BPM Operations (tons/yr)	T79 Fume Incinerator (tons/yr)
VOC	300	300
CO	150	30
NOx	300	30
SO_2	300	5
Fluorides	6	2

Facility: Source wide
Parameter: Plantwide Emission Limits for NOx, and SO_2;
PAL Limit:

Pollutant	(Tons/yr)
NOx	648
SO_2	2,059

The attached spreadsheet provides the monthly actual emissions for the BPM operations and PAL NOx and SO_2 limits. The information is used to determine compliance with the emission limits provided above. This emission summary report was:

Submitted by:_____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006

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									
NOx									
SO_2									
Fluorides									
T79 Fume Incinerator System									
VOC, Point									
CO									
NOx									
SO_2									
Fluorides									
T49 Liquid Waste Incinerator									
VOC, Point									
CO									
NOx									
SO_2									
Fluorides									
T149 Solid-Liquid Waste Incinerator									
VOC, Point									
CO									
NOx									
SO_2									
Fluorides									
Chemical Wastewater Treatment Plant Operations									
VOC, Point									
BPM Building Operations									
VOC, Fugitive									
BPM Total									
VOC (Point+ Fugitive)									
CO									
NOx									
SO_2									

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
Fluorides									
Boilers									
NOx									
SO_2									
Foul Air Incinerator									
NOx									
SO_2									
Reciprocating Engines									
NOx									
SO_2									
Site Total PAL Limits									
NOx									
SO_2									

Indiana Department of Environmental Management
Office of Air Quality

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

Source Name:	Eli Lilly and Company – Tippecanoe Laboratories
Source Location:	1650 Lilly Road, Lafayette, IN, 47909
County:	Tippecanoe
SIC Code:	2833 and 2834
Operation Permit No.:	T157-6879-00006
Operation Permit Issuance Date:	February 27, 2004
Application No.:	SPM 157-21811-00006
Permit Reviewer:	Dr. Trip Sinha

On February 11, 2006, the Office of Air Quality (OAQ) had a notice published in the Journal and Courier, Lafayette, Indiana, stating that Eli Lilly and Company had applied for a PAL permit for SO_2 and NOx emissions from the entire source. 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 March 8, 2006, Eli Lilly and Company submitted the following written comments:

The comments and responses appear below. Any revisions to the permit are shown by the additions being in bold and the deletions being in strikeout.

Comment 1: Lilly objects to the inclusion of proposed Section B.26 as it is currently drafted. The wording of this section does not match the words from the rule language on which it is based. The proposed language limits the process for changing existing permit conditions to permitting actions "pursuant to Title 1 of the Clean Air Act". This language is not found in 326 IAC 2-1.1-9.5, and therefore, it should be deleted.

Lilly proposes the following language for Section B.26:

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action ~~pursuant to Title I of the Clean Air Act~~; or

(b) the emissions unit to which the condition pertains permanently ceases operation.

Response 1: IDEM agrees that Condition B.26, as written, restricts the process of changing the existing permit conditions to permitting actions implemented pursuant to Title 1 of the Clean Air Act. The existing permit conditions may be changed through any of the approval processes allowed by 326 IAC 2-7-11 or 12. Therefore, Condition B.26 has been revised accordingly.

Comment 2: Lilly offers two minor amendments to the proposed language found in proposed section C.17(c). The first amendment reflects the recent court ruling that invalidated the "Clean Unit" provisions in the federal NSR rules, and the second amendment revises the language to more closely match the language found in the rules.

(c) If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, other than projects ~~at a Clean Unit or~~ at a source with Plant-wide Applicability Limitation (PAL)), which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee)) may result in significant emissions increase and the Permittee elects to ~~utilize~~**use** the **method specified in 326 IAC 2-2-1(rr)(2)(A) for calculating projected actual emissions**~~"projected actual emissions" (as defined in 326 IAC 2-2-1 (rr))~~, the Permittee shall comply with following:

Response 2: Since the recent court ruling invalidated the "Clean Unit" provisions in the federal NSR rules, "Clean unit" reference in Condition C.17(c) has been deleted.

When determining "projected actual emissions" the Permittee has to consider both 326 IAC 2-2-1(rr)(1) and (2). The Permittee has to project its emissions for 5 or 10 years depending on the project. Therefore, no changes to Condition C.17(c) have been made except the deletion of clean unit in Condition C.17(c). Condition C.17(c) reads as follows:

C.17(c) If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1 (qq)) at an existing emissions unit, other than projects ~~at a Clean Unit or~~ at a source with Plant-wide Applicability Limitation (PAL)), which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1 (rr)), the Permittee shall comply with following:

……..

Comment 3: In the draft permit, IDEM proposes to delete conditions D.1.3, D.1.9, D.1.14, and D.1.18(c), and renumber the subsequent sections and paragraphs accordingly. Lilly agrees that these provisions should be deleted. Instead of renumbering the subsequent sections, however, Lilly recommends that the deleted sections be noted as "Reserved". By reserving these section numbers, the remaining sections do not need to be renumbered. The site's compliance management system utilizes the permit condition numbers. Revising the numbers of the permits requires a revision to the computerized compliance management system.

Response 3: The Conditions D.1.3, D.1.9, D.1.14, and D.1.18(c) have been restored in the proposed permit as follows:

D.1.3	Reserved
D.1.9	Reserved
D.1.14	Reserved
D.1.18(c)	Reserved

The Conditions D.1.3, D.1.4, D.1.5, D.1.6, D.1.7, and D.1.8 in the draft permit have been renumbered as D.1.4, D.1.5, D.1.6, D.1.7, D.1.8, D.1.10, respectively, in the proposed permit.

The Conditions D.1.9, D.1.10, D.1.11, D.1.12, and D.1.13 in the draft permit have been renumbered to D.1.11, D.1.12, D.1.13, D.1.15, and D.1.16, respectively, in the proposed permit.

The Conditions D.1.14, D.1.15, D.1.16, D.1.17, D.1.18, D.1.19, D.1.20 in the draft permit have been renumbered to D.1.17, D.1.18, D.1.19, D.1.20, D.1.21, D.1.22, and D.1.23, respectively, in the proposed permit.

The Condition D.1.18(c) in the draft permit has been renumbered as D.1.18(d) in the proposed permit.

Comment 4: **Section D.3.3 Particulate Matter Emission Limitations**

Lilly believes this section should cite to the regulatory authority for the PM emission limits, 326 IAC 6-3-2:

D.3.3 Particulate Matter (PM) Emission Limitations **[326 IAC 6-3-2]**

Pursuant to **326 IAC 6-3-2,** Registration 157-3220 Issued September 3, 1993, Registration 157-4466 Issued May 8, 1995, and Registration 157-7144 Issued December 4, 1996, the emission units presented in the table below shall not exceed the following particulate matter emission rates based on the following maximum throughput rates:
.....

Response 4: Condition D.3.3 has been revised accordingly.

Comment 5: **Section G.1.4 Nitrogen Oxides [NOx] Emission Limit Determination and Section G.1.5 Sulfur Dioxide [SO_2] Emission Limit Determination**

Lilly has identified errors in the proposed emission factors used to determine NOx and SO_2 emissions for the coal fired boilers. These errors are typographical errors from draft language originally provided by Lilly to IDEM during the development of the draft permit. We apologize for the error, and offer the following amendments to correct the errors.

In Condition G.1.4(a), the NOx emission factor should be 16 lb NOx/ton coal burned, not 0.67 lb NOx/ton coal burned. In Lilly's September 2005 application for the PAL permit, we proposed to use 16 lb NOx/ton coal as the emission factor. However, when we submitted proposed language for the PAL permit to IDEM in December 2005, the draft condition included the erroneous 0.67 lb NOx/ton coal burned language. Lilly believes this error occurred because *0.67 lb NOx/MMBtu* is equivalent to 16 lb NOx/ton coal burned [based on a heat content of the coal = 24 MMBtu/ton]. In drafting the proposed condition, Lilly inadvertently used the value for a lb/MMBtu emission factor instead of the value for a lb/ton emission factor. We prefer to use a lb NOx/ton coal burned emission factor.

Consequently, Lilly proposes to amend Condition G.1.4(a) as follows:

(a) The Permittee shall calculate NOx emissions from Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by a NOx emission factor of ~~0.67~~ **16** lb NOx/ton of coal burned.

Response 5: Condition G.1.4(a) has been revised accordingly.

Comment 6: The emission factor for SO_2 emissions from the coal-fired boiler found in Condition G.1.5(a) contains a typographical error that also originated in proposed language submitted by Lilly to IDEM in December 2005. The proposed permit includes an erroneous SO_2 emission factor of 0.38*S lb SO_2/ton coal burned. Instead, the emission factor should be 38*S lb SO_2/ton coal. This is the standard AP-42 emission factor for coal-fired boilers burning bituminous coal.

Lilly also proposes to revise Condition G.1.5(a) to include SO_2 emissions created while burning natural gas in the coal-fired boilers. Although these boilers primarily operate on coal, they are capable of burning both coal and natural gas at the same time, and the units operate in the co-fire mode more often than not. Basing SO_2 emissions from these boilers solely on coal consumption would omit the small level of SO_2 emissions contributed by burning the natural gas.

Therefore, Lilly proposes to amend Condition G.1.5(a) to address these issues as follows:

(a) The Permittee shall calculate SO_2 emissions from Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by an SO_2 emission factor of ~~0.~~38*S lb SO_2/ton of coal burned, where S = the percent sulfur content of the coal as determined by Condition D.1.7. **In addition, the Permittee shall calculate the SO_2 emissions from burning natural gas in Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an SO_2 emission factor of 0.6 lb SO_2/million cubic feet of natural gas burned.**

Please note that Lilly is not proposing a similar amendment to Condition G.1.4(a) for NOx emissions from the coal-fired boilers. Unlike SO_2 emissions, where the emissions result from the sulfur content of the fuel, the vast majority of NOx emissions in a boiler are "thermal NOx" created by the high temperatures in the presence of nitrogen-containing air. Therefore, the NOx emissions resulting from burning coal and natural gas simultaneously are not additive based on the contribution of each fuel. Instead, the NOx emissions would be based on the thermal and air flow conditions created by the combustion. Lilly has determined, through emissions testing, that NOx emissions are lower when firing both coal and natural gas together compared to burning coal alone. The emission factor used to determine NOx emissions in the permit represents the highest level of NOx emissions occurring when burning coal alone. Therefore, the NOx emissions

calculated by the permit requirements will exceed the actual emissions. Condition G.1.4(a) does not need to be revised to account for fuel co-firing.

Response 6: Condition G.1.5(a) has been revised accordingly.

Comment 7: In proposed Conditions G.1.4(d)(1)(A) and G.1.5(d)(1)(A), the 1250 KW generator is referred to as being the T6 1250 KW diesel electrical generator. The correct reference in both permit terms should be the T121 1250 KW diesel electrical generator.

Response 7: Conditions G.1.4(d)(1)(A) and G.1.5(d)(1)(A) have been revised as follows:

G.1.4(d)(1)(A) For the ~~T6~~ **T121** 1250 KW diesel electrical generator – 0.25 ton/month [3.0 ton/yr].

G.1.5(d)(1)(A) For the ~~T6~~ **T121** 1250 KW diesel electrical generator – 0.25 ton/month [3.0 ton/yr].

Comment 8: Lilly proposes deleting all of G.1.4(h) and G.1.5(h) except for the first sentence in each of the terms. The rest of the condition does not state or establish any applicable requirements. Instead, this language reflects a statement of the likely NOx and SO_2 emissions during startup, shutdown, and malfunction periods. This language would be appropriate to appear in the Technical Support Document.

Response 8: The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and become part of the record regarding this permit decision.

This Addendum to Technical Support Document becomes part of the Technical Support Document.

Conditions G.1.4(h) and G.1.5(h) have been revised as follows:

G.1.4(h) When determining actual annual emissions of NOx, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

~~For the operations under the proposed PAL permit, the highest NOx emissions would be expected during normal operations.~~

~~(1) Combustion operations typically emit higher levels of NOx during normal operations because the operating temperature of the combustion device is higher than it would be during periods of startup, shutdown, or malfunction.~~

~~(2) There is one device with a NOx control system - the T149 incinerator. If the NOx control device malfunctions, the continuous NOx monitor will still measure NOx concentrations.~~

G.1.5(h) When determining actual annual emissions of SO_2, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

~~For the operations under the proposed PAL permit, the highest SO_2 emissions would be expected during normal operations.~~

~~(1) SO_2 emissions are the result of either the fuel sulfur content for boilers, engines and other combustion units, or the waste content for an incinerator. During startup and shutdown modes, the fuel and waste feed rates are dropped from normal levels. During a malfunction, fuel rates and waste feed rates are typically reduced or quickly cut-off. The sulfur content of the fuel or waste does not increase as a result of an SSM event.~~

~~(2) There are three devices with SO_2 control system - the RTOs, the T49 incinerator, and the T149 incinerator. If the SO_2 control device malfunctions, the continuous SO_2 monitors on these devices will still measure the SO_2 concentrations.~~

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Eli Lilly and Company – Tippecanoe Laboratories
Source Location:	1650 Lilly Road, Lafayette, IN, 47909
County:	Tippecanoe
SIC Code:	2833 and 2834
Operation Permit No.:	T157-6879-00006
Operation Permit Issuance Date:	February 27, 2004
Significant Permit Modification No.:	SPM 157-21811-00006
Permit Reviewer:	Dr. Trip Sinha

Existing Approvals

The source was issued a Part 70 Operating Permit T157-6879-00006 on February 27, 2004. The source has since received the following:

(a) Significant Source Modification No.: 157-18322, issued on December 30, 2004:

(b) Significant Permit Modification No.: 157-20216, issued on January 19, 2005:

(c) Significant Permit Modification No.: 157-20878, issued on March 15, 2005:

(d) Administrative Amendment No.: 157-20003, issued on April 1, 2005:

(e) Administrative Amendment No.: 157-221143, issued on May 11, 2005: and

(f) Significant Permit Modification No.: 157-20732, issued on August 15, 2005.

County Attainment Status

The source is located in Tippecanoe County.

Pollutant	Status
PM_{10}	Attainment
$PM_{2.5}$	Attainment
SO_2	Attainment
NO_2	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

(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. Tippecanoe 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) Tippecanoe County has been classified as attainment for $PM_{2.5}$. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for $PM_{2.5}$ emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for $PM_{2.5}$ emissions, it has directed states to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions.

(c) Tippecanoe County has been classified as attainment or unclassifiable for CO, lead, NO_2, PM_{10}, and SO_2. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Since this source is classified as a chemical process plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(e) Fugitive Emissions
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD 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	>100
PM_{10}	>100
SO_2	>100
VOC	>100
CO	>100
NO_x	>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 2003 OAQ emission data submitted by Eli Lilly and Company.

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	>10
Total HAPs	>25

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM_{10}	394
SO_2	1,123
VOC	111
CO	155
NO_x	349
HAP	
METHANOL	11.9
CHLOROFORM	1.01
N,N-DIMETHYLFORMAMIDE	0.255
ACETONITRILE	2.77
DICHLOROMETHANE (METHYLENE CHLORIDE)	9.7
TERT-BUTYL ALCOHOL	260
ACETOPHENONE	0.13
BENZOYL CHLORIDE	0.503
1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	0.255
ETHYLENE GLYCOL	5.65
TOLUENE	3.71
PHENOL	0.005
N-HEXANE	44.4

Pollutant	Actual Emissions (tons/year)
TRIETHYLAMINE	0.466
N-METHYL-2-PYRROLIDONE	0.255
MERCURY	0.007
HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY)	10.98
AMMONIA	2.25
SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)	12.6
CHLORINE	0.503
GLYCOL ETHERS	0.75
LEAD COMPOUNDS	0.013
DIOXIN AND DIOXIN-LIKE COMPOUNDS	Neg.

Background and Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a Significant Permit Modification - Plantwide Applicability Limitations (PAL) application for sulfur dioxide (SO_2) and nitrogen dioxides (NO_2) from Eli Lilly and Company – Tippecanoe Laboratories relating to the operation of a pharmaceutical and animal health manufacturing facility.

Once issued, the PAL permit provisions will enable Lilly to install new equipment, expand existing operations, add new operations, and modify its processes without the changes being subject to Major New Source Review [NSR] requirements in 326 IAC 2-2 as long as Lilly maintains compliance with the PAL provisions. Lilly proposes to retain existing permit conditions from the flexible Title V operating permit that approve in advance a variety of changes that would otherwise be subject to minor New Source Review provisions in 326 IAC 2-7-10.5. Retaining this language will allow Lilly to make those changes by submitting a notification 10 days prior to making the change instead of obtaining source modification approvals for the change.

The PAL NOx and SO_2 limits apply to the entire plant site, which includes the following types of operations:

(1) Bulk pharmaceutical manufacturing [BPM] operations controlled by regenerative thermal oxidizers [RTOs]

(2) BPM support operations and the T79 fume incinerators

(3) T49 liquid waste incinerator

(4) T149 rotary kiln liquid/solid waste incinerator

(5) Utilities [boilers] and utility support operations

(6) Fermented products manufacturing facilities

(7) Fermented products support operations

(8) Research and development facilities

(9) Wastewater and waste transfer facilities

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

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

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

Baseline Actual Emissions

Baseline actual emissions are defined in 326 IAC 2-2-1(xx) as the average actual emissions from any 24 month period of the last 10 years. For both NO_2 and SO_2 Lilly has proposed a baseline period of the 24 month period beginning January 1, 1996 and ending December 31, 1997.

Pollutant	Emissions in year 1996 (tons/yr)	Emissions in year 1997 (tons/yr)	Baseline actual emissions (tons/yr)
NO_2	538.6	535	537
SO_2	1,746	1,796	1771

PAL Emissions Limits

	NOx (tons/yr)	SO_2 (tons/yr)
Baseline actual emissions	**537**	**1771**
Deductions for emissions units taken out of service [average emissions during baseline period]		
T53 Production Building	-1.6	-1.3
T54 Production Building	-2.2	0.0
T57 Production Building	-1.6	0.0
Sum of deductions for shutdown	**-5.4**	**-1.3**
Increase for new emission units [Potential to emit]		
T149 Rotary Kiln Incinerator	76.5	250
Sum of potential to emit for new emission units	**76.5**	**250**
Major NSR significant emission increase	**40**	**40**
PAL Limit	**648**	**2059.7**

Federal Rule Applicability Determination

The following federal rules are applicable to the source

326 IAC 2-2.4 and 40 CFR 51.166

(a) This rule establishes actuals plantwide applicability limitations (PAL) for nitrogen oxides and sulfur dioxide. A source that is subject to P.L. 231-2003, Section 6 shall comply with the requirements of 326 IAC 2-2.6. Eli Lilly and Company does not belong to one of the SIC codes listed in the 326 IAC 2-2.6 (Federal Requirements for Sources Subject to PL 231-2003, Endangered Industries), therefore, Eli Lilly and Company is not subject to 326 IAC 2-2.6.

(b) If Lilly maintains its total source-wide nitrogen oxides and sulfur dioxide emissions below the PAL levels, meets the requirements in this rule, and complies with the PAL permit, then any physical change in or change in the method of operation of the source:

(1) is not a major modification for the PAL permit;

(2) does not have to be approved through 326 IAC 2-2; and

(3) is not subject to 2-2-8(a)(3).

(c) Except as provided under subsection (b)(3), Lilly shall continue to comply with all applicable federal or state requirements, emissions limitations, and work practice requirements that were established prior to the effective date of the PAL.

CAM (40 CFR 64)

(a) 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.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

	Description	NO_x potential pre-control emissions [ton/yr]	NOx Controls required?	CAM eligible?	CEMS already required	CAM required?	SO_2 potential pre-control emissions [ton/yr]	SO_2 controls required?	CAM eligible?	CEMS already required	CAM required?
T6 BLR001	92 MMBtu/hr Coal boiler #1	184	No	No	--	No	2418	No	No	--	No
T6 BLR002	92 MMBtu/hr Coal boiler #2	184	No	No	--	No	2418	No	No	--	No
T6 BLR003	92 MMBtu/hr Coal boiler #3	184	No	No	--	No	2418	No	No	--	No
T6 BLR004	142 MMBtu/hr Natural gas/fuel oil boiler #4	174	No	No	--	No	311	No	No	--	No
T6 BLR005	97 MMBtu/hr Natural gas/fuel oil boiler #5	39.9	No	No	--	No	39.9	No	No	--	No
T6 T121	1250 KW Diesel generator	17.7	No	No	--	No	3.0	No	No	--	No
T5*	380 HP Diesel generator	2.9	No	No	--	No	0.2	No	No	--	No
T62*	1100 KW Diesel generator	8.9	No	No	--	No	1.49	No	No	--	No
T135*	390 HP Diesel generator	3.0	No	No	--	No	0.2	No	No	--	No
T78*	58 KW Diesel compressor	10.6	No	No	--	No	0.7	No	No	--	No
T89-1*	58 KW Diesel compressor	10.6	No	No	--	No	0.7	No	No	--	No
T89-2*	58 KW Diesel compressor	10.6	No	No	--	No	0.7	No	No	--	No
T174	Thermal Research Fume Incinerator	10.9	No	No	--	No	20.0	No	No	--	No
T49	Liquid waste incinerator	300	No	No	--	No	> 100	Yes	Yes	Yes	No
T149	Rotary Kiln liquid/solid incinerator	> 100	Yes	Yes	Yes	No	> 100	Yes	Yes	Yes	No
RTOs 1 and 2	Regenerative Thermal Oxidizers for emissions control of pharmaceutical manufacturing facilities	265.7	No	No	Yes	No	> 100	Yes	Yes	Yes	No
T79 INC309 and T79 INC310	T79 Fume incinerators for VOC emissions control of BPM support operations	30	No	No	--	No	5	No	No	--	No
T71	T71 Pilot Plant	0.1	No	No	--	No	1.5	No	No	--	No

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

IDEM has determined that no Compliance Assurance Monitoring [CAM] requirements are applicable to the NOx and SO_2 emitting emission units under this PAL. Only three emission units utilize emission control systems to reduce NOx or SO_2 emissions: the T49 liquid waste incinerator for SO_2, the T149 rotary kiln incinerator for both NOx and SO_2, and the RTOs for both NOx and SO_2. For each of those pollutant specific emission units, the existing Title V permit already required continuous emissions monitoring systems. Therefore, CAM is not applicable to these emission units.

State Rule Applicability Determination

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

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

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

(1) The PAL pollutant and the applicable source-wide emission limitation in tons per year.

(2) The PAL permit effective date and the expiration date of the PAL.

(3) Specification in the PAL permit that if the Permittee applies to renew a PAL before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the department.

(4) A requirement that emission calculations for compliance purposes include emissions from startups, shutdowns, and malfunctions.

(5) A requirement that, once the PAL expires, the major stationary source is subject to the requirements of 326 IAC 2-2.4-9.

(6) The calculation procedures that the Permittee shall use to convert the monitoring system data to monthly emissions and annual emissions based on a twelve (12) month rolling total.

(7) A requirement that the Permittee monitor all emissions units in accordance with 326 IAC 2-2.4-12.

(8) A requirement to retain the records required under 326 IAC 2-2.4-13 on site. The records may be retained in an electronic format.

(9) A requirement to submit the reports required under 326 IAC 2-2.4-14 by the required deadlines.

(10) Any other requirements that IDEM deems necessary to implement and enforce the PAL.

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

The PAL effective period is ten (10) years.

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

(a) If this PAL is not renewed in accordance with the procedures in 326 IAC 2-2.4-10 it shall expire at the end of the PAL effective period, and the requirements in this section shall apply.

(b) Each emissions unit or each group of emissions units that existed under the PAL shall comply with an allowable emission limitation under a revised permit established.

(c) Until IDEM issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, the Permittee shall continue to comply with a source-wide, multiunit emissions cap equivalent to the level of the PAL emission limitation.

(d) Any physical change or change in the method of operation at the source will be subject to major NSR requirements if the change meets the definition of major modification in 326 IAC 2-2-1(ee).

(e) The Permittee shall continue to comply with any state or federal applicable requirements that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established under 326 IAC 2-2-8(a)(3), but were eliminated by the PAL.

326 IAC 2-2.4-10 (Renewal of a PAL)
The Permittee shall submit a timely application to IDEM to request renewal of a PAL. A timely application is one that is submitted at least six (6) months prior to, but not earlier than eighteen (18) months from the date of PAL expiration. If the Permittee submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.

326 IAC 2-2.4-12 Monitoring requirements for PAL
(a) The following general requirements apply:

(1) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determine plantwide emissions of the PAL pollutants in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by the system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.

(2) The PAL monitoring system must employ one (1) or more of the four (4) general monitoring approaches meeting the minimum requirements set forth in subsection (b) and must be approved by the department.

(3) Notwithstanding subdivision (2), an alternative monitoring approach may be employed:

(A) that meets subdivision (1); and

(B) if it is approved by the IDEM.

(4) Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.

(b) The followings are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in subsections (c) through (i):

(1) Mass balance calculations for activities using solvents.

(2) CEMS.

(3) CPMS or PEMS.

(4) Emission factors.

(c) The Permittee when using mass balance calculations to monitor PAL pollutant emissions from activities using solvents shall meet the following requirements:

(1) Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit.

(2) Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process.

(3) Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from the material, the Permittee must use the highest value of the range to calculate the PAL pollutant emissions unless the IDEM determines there is site-specific data or a site-specific monitoring program to support another content within the range.

(d) The Permittee when using emission factors to monitor PAL pollutant emissions shall meet the following requirements:

(1) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors development.

(2) The emissions unit shall operate within the designated range of use for the emission factor if applicable.

(3) If technically practicable, the Permittee that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within six (6) months of PAL permit issuance unless the IDEM determines that testing is not required.

(e) The Permittee must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data unless another method for determining emissions during the periods is specified in the PAL permit.

(f) All data used to establish the PAL pollutant must be revalidated through performance testing or other scientifically valid means approved by the IDEM. The testing must occur at least once every five (5) years after issuance of the PAL.

326 IAC 2-2.4-13 Record keeping requirements

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

(b) The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus five (5) years:

(1) A copy of the PAL permit application and any applications for revisions to the PAL.

(2) Each annual certification of compliance pursuant to 40 CFR Part 70 and the data relied on in certifying the compliance.

326 IAC 2-2.4-14 Reporting and notification requirements
The Permittee shall submit semiannual monitoring reports and deviation reports to the IDEM in accordance with 326 IAC 2-7.

Compliance Requirements 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 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.

(1) The compliance determination requirements applicable to this PAL permit are summarized in the Table below:

Emission unit	**NOx emissions determination method**	**SO_2 emissions determination method**
T6 BLR001 Coal boiler #1	• Track amount of coal burned • Apply site-specific emission factor of 16 lb NOx/ton coal burned	• Collect coal sample 2x daily • Monthly sulfur analysis of composite coal sample • Track amount of coal burned • Apply AP-42 emission factor of 38x(%S) lb SO_2/ton coal burned.
T6 BLR002 Coal boiler #2	Same as Boiler 1	Same as Boiler 1
T6 BLR003 Coal boiler #3	Same as Boiler 1	Same as Boiler 1
T6 BLR004 Natural gas/fuel oil boiler #4	• Track amount of natural gas and fuel oil burned. • Apply an emission factor of 280 lb NOx/MMcf natural gas burned • Apply an emission factor of 24 lb NOx/1000 gallons of fuel oil burned	• Track amount of natural gas and fuel oil burned. • Apply an emission factor of 0.6 lb SO_2/MMcf natural gas burned • Apply an emission factor of 69.6 lb SO_2/1000 gallons of fuel oil burned
T6 BLR005 Natural gas/fuel oil boiler #5	Same as Boiler 4, except the natural gas emissions factor is 100 lb NOx/MMcf burned and the fuel oil emission factor is 20 lb NOx/1000 gallons of fuel oil burned	Same as Boiler 4

Emission unit	NOx emissions determination method	SO_2 emissions determination method
T6 T121 Diesel generator	(1) Potential to emit method: The Permittee shall use the following value, which represents the NOx potential to emit of the diesel engine, as the actual emissions: 1.5 ton/month [18.1 ton/yr]. Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.024 lb NOx/brake horsepower-hour	(1) Potential to emit method: The Permittee shall use the following value, which represents the SO_2 potential to emit of the diesel engine, as the actual emissions: 0.25 ton/month [3.0 ton/yr]. Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.00405 lb SO_2/brake horsepower-hour
T5 Diesel generator	(1) Potential to emit method: The Permittee shall use the following value, which represents the NOx potential to emit of the diesel engine, as the actual emissions: 0.24 ton/month [2.9 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.031 lb NOx/brake horsepower-hour	(1) Potential to emit method: The Permittee shall use the following value, which represents the SO_2 potential to emit of the diesel engine, as the actual emissions: 0.02 ton/month [0.2 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.00205 lb SO_2/brake horsepower-hour
T62 Diesel generator	(1) Potential to emit method: The Permittee shall use the following value, which represents the NOx potential to emit of the diesel engine, as the actual emissions: 0.7 ton/month [8.9 ton/yr]. Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.024 lb NOx/brake horsepower-hour	(1) Potential to emit method: The Permittee shall use the following value, which represents the SO_2 potential to emit of the diesel engine, as the actual emissions: 0.1 ton/month [1.5 ton/yr]. Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.0004045 lb SO_2/brake horsepower-hour

Emission unit	**NOx emissions determination method**	**SO_2 emissions determination method**
T135 Diesel generator	(1) Potential to emit method: The Permittee shall use the following value, which represents the NOx potential to emit of the diesel engine, as the actual emissions: 0.3 ton/month [3.0 ton/yr]. Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.031 lb NOx/brake horsepower-hour	(1) Potential to emit method: The Permittee shall use the following value, which represents the SO_2 potential to emit of the diesel engine, as the actual emissions: 0.02 ton/month [0.2 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.00205 lb SO_2/brake horsepower-hour
T78 Diesel compressor	(1) Potential to emit method: The Permittee shall use the following value, which represents the NOx potential to emit of the diesel engine, as the actual emissions: 0.9 ton/month [10.6 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.031 lb NOx/brake horsepower-hour	(1) Potential to emit method: The Permittee shall use the following value, which represents the SO_2 potential to emit of the diesel engine, as the actual emissions: 0.06 ton/month [0.7 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.00205 lb SO_2/brake horsepower-hour
T89-1 Diesel compressor	(1) Potential to emit method: The Permittee shall use the following value, which represents the NOx potential to emit of the diesel engine, as the actual emissions: 0.9 ton/month [10.6 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.031 lb NOx/brake horsepower-hour	(1) Potential to emit method: The Permittee shall use the following value, which represents the SO_2 potential to emit of the diesel engine, as the actual emissions: 0.06 ton/month [0.7 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.00205 lb SO_2/brake horsepower-hour

Emission unit	**NOx emissions determination method**	**SO_2 emissions determination method**
T89-2 Diesel compressor	(1) Potential to emit method: The Permittee shall use the following value, which represents the NOx potential to emit of the diesel engine, as the actual emissions: 0.9 ton/month [10.6 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.031 lb NOx/brake horsepower-hour	(1) Potential to emit method: The Permittee shall use the following value, which represents the SO_2 potential to emit of the diesel engine, as the actual emissions: 0.06 ton/month [0.7 ton/yr] Or (2) Actual hours of operation method: • Track hours of engine operation. • Apply an emission factor of 0.00205 lb SO_2/brake horsepower-hour
T174 Thermal Research Incinerator	Actual emissions are equal to hourly potential emission rate [2.5 lb NOx/hr] times actual hours of operation	Actual emissions are equal to 4.56 lb SO_2/hr times actual hours of operation
T49 Liquid waste incinerator T149 Rotary Kiln liquid/solid incinerator RTOs 1 and 2 Regenerative Thermal Oxidizers	Use the same method required in Condition F.1.5(a) of the existing Title V permit: • Measure NOx concentration with CEMS • Measure exhaust flow rate with continuous flow meter • Multiply NOx concentration by flow to determine mass emissions • Apply data substitution when CEMS for flow monitor is not available	Use the same method required in Condition F.1.6(a) of the existing Title V permit: • Measure SO_2 concentration with CEMS • Measure exhaust flow rate with continuous flow meter • Multiply SO_2 concentration by flow to determine mass emissions • Apply data substitution when CEMS for flow monitor is not available
T79 INC309/T79 INC 310 T79 Fume incinerators	Determine using the same method required in Condition F.1.5(b) of the existing Title V permit: Amount of natural gas burned and AP-42 emission factors. Additional NOx emissions determined by estimating or measuring the amount of nitrogen-bearing solvent entering the incinerator and assuming 6% of that nitrogen converts to NOx when combusted.	Determine using the same method required in Condition F.1.6(b) of the existing Title V permit. Amount of natural gas burned and AP-42 emission factors. Additional SO_2 emissions determined by estimating or measuring the amount of sulfur-bearing solvent entering the incinerator and assuming 100% of that sulfur converts to SO_2 when combusted.
T71 Pilot Plant	Pilot Plant NOx emissions are assumed to be the potential to emit: 0.1 ton/yr	Pilot Plant SO_2 emissions are assumed to be the potential to emit: 1.5 ton/yr

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

Proposed Changes

All the operation conditions from approvals issued after Part 70 permit issuance have been incorporated into this Part 70 permit.

The changes listed below have been made to Part 70 Operating Permit No. T157-6879-00006. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

The following revisions have been made to the permit:

Changes due to PAL Permit:

(1) A new G Section has been added as follows:

SECTION G.1 Actuals Plantwide Applicability Limitations Requirements

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

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

The entire plant site is subject to the actuals plantwide applicability limitations [PAL] requirements described in this G section.

Source wide emission limits [326 IAC 2-2.4-7(1)]

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

(a) Nitrogen oxides (NOx) emissions from the entire source shall not exceed 637 tons per 12 consecutive month period with compliance determined at the end of each month. This provision does not supersede any other NOx emission limits contained in this permit except NOx emission limits under 326 IAC 2-2-8(a)(3).

(b) Sulfur dioxide (SO_2) emissions from the entire source shall not exceed 2059 tons per 12-consecutive month period, with compliance determined at the end of each month. This provision does not supersede any other SO_2 emission limits contained in this permit except SO_2 emission limits under 326 IAC 2-2-8(a)(3).

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

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

Any physical change in or change in the method of operation of this source is not a major modification for NOx or SO2, and not subject to the review requirements of 326 IAC 2-2 provided the actual emissions of NOx and SO2 from the entire source do not exceed the emission limits in Condition G.1.3 of this permit. This provision does not supersede or affect the Flexible Permit requirements in Section F of this permit.

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

(a) The requirements of this section G become effective on the issuance date of the PAL permit, and expire ten years after the issuance date of the PAL permit.

(b) **If the Permittee applies to renew this PAL at least six months prior to expiration of the PAL, but no earlier than eighteen months prior to the expiration of the PAL, then notwithstanding the expiration date in subsection G.1.3(a), the PAL shall continue to be effective until the revised permit with the renewed PAL is issued. The application must contain the elements described in 326 IAC 2-2.4-3 and 326 IAC 2-2.4-10.**

(c) **Once this PAL expires, if not otherwise renewed, then the requirements of 326 IAC 2-2.4-9 are applicable.**

(d) **The requirements for renewing this PAL are described in 326 IAC 2-2.4-10.**

(e) **The requirements for increasing the emissions limits described in Condition G.1.1 are described in 326 IAC 2-2.4-11.**

(f) **The requirements applicable to terminating or revoking this PAL are described in 326 IAC 2-2.4-15.**

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

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

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

(a) **The Permittee shall calculate NOx emissions from Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by a NOx emission factor of 0.67 lb NOx/ton of coal burned.**

(b) **The Permittee shall calculate NOx emissions from burning natural gas in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NOx emission factor of 280 lb NOx/million cubic feet of natural gas burned in Boiler 4 and 100 lb NOx/million cubic feet of natural gas burned in Boiler 5.**

(c) **The Permittee shall calculate NOx emissions from burning fuel oil in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by an NOx emission factor of 24 lb NOx/1000 gallons of fuel oil burned in Boiler 4 and 20 lb NOx/1000 gallons of fuel oil burned in Boiler 5.**

(d) **The Permittee shall determine NOx emissions from diesel engines, in tons, each calendar month, through one of the methods described in (1) and (2) below. The Permittee shall identify which method it used when it reports emissions pursuant to Condition G.1.8.**

(1) **Potential to emit method: The Permittee shall use the following values, which represent the NOx potential to emit of the diesel engines, as the actual emissions:**

(A) **For the T6 1250 KW diesel electrical generator – 1.5 ton/month [18.1 ton/yr].**

(B) **For the T5 380 HP diesel emergency generator – 0.2**

ton/month [2.9 ton/yr]

(C) For the T62 1100 KW diesel emergency generator – 0.7 ton/month [8.9 ton/yr].

(D) For the T135 390 HP diesel emergency generator – 0.3 ton/month [3.0 ton/yr].

(E) For the T78 58 KW diesel compressor engine – 0.9 ton/month [10.6 ton/yr]

(F) For the T89-1 KW diesel compressor engine – 0.9 ton/month [10.6 ton/yr].

(G) For the T89-2 KW diesel compressor engine – 0.9 ton/month [10.6 ton/yr].

(2) Actual hours of operation method: The Permittee shall calculate NOx emissions from diesel engines by multiplying the actual hours of operation per calendar month for each diesel engine by the engine's horsepower rating and by an NOx emission factor of 0.024 lb NOx/brake horsepower-hour for diesel engines greater than 600 brake horse power and 0.031 lb NOx/brake horsepower-hour for diesel engines smaller than 600 brake horse power

(e) The Permittee shall calculate NOx emissions from the T174 Thermal Research Incinerator, in tons, each calendar month, by multiplying the actual hours of operation of the incinerator for each month by a NOx emission factor of 2.5 lb NOx/hour of operation.

(f) The methods for determining monthly NOx emissions from the T49 Incinerator, the T149 Incinerator, the RTOs, and the T79 Fume Incinerators are described in Condition F.1.5 of this permit.

(g) NOx emissions from the T71 Pilot Plant are equivalent to the potential to emit for this facility – 0.1 ton/yr.

(h) When determining actual annual emissions of NOx, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

For the operations under the proposed PAL permit, the highest NOx emissions would be expected during normal operations.

(1) Combustion operations typically emit higher levels of NOx during normal operations because the operating temperature of the combustion device is higher then than it would be during periods of startup, shutdown, or malfunction.

(2) There is one device with a NOx control system - the T149 incinerator. If the NOx control device malfunctions, the continuous NOx monitor will still measure NOx concentrations.

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

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

(a) The Permittee shall calculate SO_2 emissions from Boilers 1, 2, and 3, in tons, each calendar month, by multiplying the amount of coal consumed in each calendar month by an SO_2 emission factor of 0.38*S lb SO_2/ton of coal burned, where S = the percent sulfur content of the coal as determined by Condition D.1.7.

(b) The Permittee shall calculate SO_2 emissions from burning natural gas in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an SO_2 emission factor of 0.6 lb SO_2/million cubic feet of natural gas burned.

(c) The Permittee shall calculate SO_2 emissions from burning fuel oil in Boilers 4 and 5, in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by an SO_2 emission factor of 69.6 lb SO_2/1000 gallons of fuel oil burned.

(d) The Permittee shall determine SO_2 emissions from diesel engines, in tons, each calendar month, through one of the methods described in (1) and (2) below. The Permittee shall identify which method it used when it reports emissions pursuant to Condition G.1.8.

(1) Potential to emit method: The Permittee shall use the following values, which represent the SO_2 potential to emit of the diesel engines, as the actual emissions:

(A) For the T6 1250 KW diesel electrical generator – 0.25 ton/month [3.0 ton/yr].

(B) For the T5 380 HP diesel emergency generator – 0.02 ton/month [0.2 ton/yr]

(C) For the T62 1100 KW diesel emergency generator – 0.1 ton/month [1.5 ton/yr].

(D) For the T135 390 HP diesel emergency generator – 0.02 ton/month [0.2 ton/yr].

(E) For the T78 58 KW diesel compressor engine – 0.06 ton/month [0.7 ton/yr].

(F) For the T89-1 KW diesel compressor engine – 0.06 ton/month [0.7 ton/yr].

(G) For the T89-2 KW diesel compressor engine – 0.06 ton/month [0.7 ton/yr].

(2) Actual hours of operation method: The Permittee shall calculate SO_2 emissions from diesel engines by multiplying the actual hours of operation per calendar month for each diesel engine by the engine's horsepower rating and by an SO_2 emission factor of

0.0004045 lb SO_2/brake horsepower-hour for diesel engines greater than 600 brake horse power and 0.00205 lb SO_2/brake horsepower-hour for diesel engines smaller than 600 brake horse power

(e) The Permittee shall calculate SO_2 emissions from the T174 Thermal Research Incinerator, in tons, each calendar month, by multiplying the actual hours of operation of the incinerator for each month by a SO_2 emission factor of 4.56 lb SO_2/hour of operation.

(f) The methods for determining monthly SO_2 emissions from the T49 Incinerator, the T149 Incinerator, the RTOs, and the T79 Fume Incinerators are described in Condition F.1.6 of this permit.

(g) SO_2 emissions from the T71 Pilot Plant are equivalent to the potential to emit for this facility – 1.5 ton/yr [0.125 ton/month].

(h) When determining actual annual emissions of SO_2, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

For the operations under the proposed PAL permit, the highest SO_2 emissions would be expected during normal operations.

(1) SO_2 emissions are the result of either the fuel sulfur content for boilers, engines and other combustion units, or the waste content for an incinerator. During startup and shutdown modes, the fuel and waste feed rates are dropped from normal levels. During a malfunction, fuel rates and waste feed rates are typically reduced or quickly cut-off. The sulfur content of the fuel or waste does not increase as a result of an SSM event.

(2) There are three devices with SO_2 control systems - the RTOs, the T49 incinerator, and the T149 incinerator. If the SO_2 control device malfunctions, the continuous SO_2 monitors on these devices will still measure the SO_2 concentrations.

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

The Permittee shall revalidate the emissions determination methods described in Conditions G.1.4 and G.1.5 through performance testing or other scientifically valid means approved by the department no later than five years after the effective date of the PAL provisions.

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

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

The Permittee shall retain a copy of all records necessary to determine compliance with the requirements of this G Section, including a determination of each emissions unit's twelve (12) month rolling total emissions, for five years from the date of the record.

The Permittee shall retain a copy of the PAL permit application, any applications for revisions to the PAL, each annual compliance certification as required by Condition B.9 of this permit, and data relied on in the certification for the duration of the PAL plus five years.

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

(a) The Permittee shall submit a semi-annual report, containing the information described below, to the address listed in Section C – General Reporting Requirements, within thirty (30) days after the end of the calendar quarter being reported. This report requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). The report shall include the following information:

(1) The identification of the owner and operator of the facility and the permit number.

(2) Total emissions of NOx and SO_2, in tons per rolling 12 month period for each month in the reporting period, as determined by Conditions G.1.4 and G.1.5.

(3) All data relied upon, including but not limited to, any quality assurance or quality control data, in determining emissions.

(4) A list of any emissions units modified or added to the major stationary source during the reporting period.

(5) If not previously reported pursuant to another condition in this permit, the number, duration, and cause of any deviations or monitoring malfunctions, other than the time associated with zero and span calibration checks, and any corrective action taken.

(6) If not required to be reported pursuant to another condition in this permit, information about monitoring system shutdowns including the following information:

(A) Notification to the department of the shutdown of any monitoring system.

(B) Whether the shutdown was permanent or temporary.

(C) The reason for the shutdown.

(D) The anticipated date that the monitoring system will be fully operational or replaced with another monitoring system.

(E) Whether the emissions unit monitored by the monitoring system continued to operate.

(F) If the emission unit monitored by the monitoring system continued to operate, the calculation of the:

(i) Emissions of the pollutant; or

(ii) Number determined by method included in the permit, as provided by 326 IAC 2-2.4-12(g).

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

requirements of 326 IAC 2-2.4-14(c).

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

(2) Condition D.1.2(d) has been deleted.

This condition established a fuel oil consumption limit for purposes of limiting SO_2 emissions to less than PSD thresholds. Pursuant to 326 IAC 2-2.4-1(c)(3), old synthetic minor limits can be eliminated when a source is granted a PAL permit.

D.1.2 Sulfur Dioxide (SO_2) Limitations [~~326 IAC 2-2,~~ 326 IAC 7-1.1-2, and PC (79) 1510 Issued March 22, 1982]

~~(d) The SO_2 emissions from Boiler 5 shall not equal or exceed 40 tons per year to avoid the r equirements of 326 IAC 2-2 (Prevention of Significant Deterioration). This emission limit correlates to a maximum fuel oil usage of 1,120,000 gallons per 12 consecutive month period based on a maximum sulfur content of 0.49 percent.~~

(3) Condition D.1.3 has been deleted.

This provision established a natural gas consumption limit for purposes of limiting NOx emissions to less than PSD thresholds. Pursuant to 326 IAC 2-2.4-1(c)(3), old synthetic minor limits can be eliminated when a source is granted a PAL permit. Subsequent conditions were renumbered.

~~D.1.3 Nitrogen Oxides (NO_x) Limitations [326 IAC 2-2] [PC (79) 1510 Issued March 22, 1982]~~

~~The NOx emissions from Boiler 5 shall not equal or exceed 40 tons per year to avoid the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). This emission limit correlates to a maximum natural gas usage of 780 MMCF per 12 consecutive month period. To account for fuel oil usage, the following equivalency shall be used:~~

~~1 MMCF of Natural Gas = 5000 gallons of Fuel Oil~~

(4) Condition D.1.9 has been deleted.

This provision implemented the fuel consumption limits in D.1.2(d) and D.1.3, which have been deleted. Subsequent conditions were renumbered.

~~D.1.9 Natural Gas and Fuel Oil Consumption Monitor [326 IAC 2-2]~~

~~The Permittee shall monitor the natural gas and fuel oil usage for Boiler No. 5 on a monthly basis.~~

(5) Condition D.1.14 has been deleted.

This provision implemented the natural gas consumption limits in D.1.3, which has been deleted. Subsequent conditions were renumbered.

~~D.1.14 Natural Gas Consumption Records~~

~~The Permittee shall maintain natural gas consumption records for Boiler 5 on a calendar month basis in accordance with Condition D.1.9.~~

(6) Condition D.1.18 (c) has been deleted.

This provision implemented the fuel consumption limits in D.1.2 (d) and D.1.3. Pursuant to 326 IAC 2-2.4-1(c)(3), old synthetic minor limits can be eliminated when a source is granted a PAL permit.

D.1.18 (Now D.1.15) Reporting Requirements

(c) ~~The Permittee shall submit quarterly summary reports of the monthly natural gas and fuel oil consumption records required by Condition D.1.14 for Boiler 5.~~

~~(d)~~ All reports shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(7) Conditions D.16.2, D.16.4 (a) and (b) have been deleted. Conditions D.16.2 and D.16.4 have been designated as "Reserved".

Condition D.16.2 established an operating limit for purposes of limiting SO_2 emissions to less than PSD thresholds. Pursuant to 326 IAC 2-2.4-1(c)(3), old synthetic minor limits can be eliminated when a source is granted a PAL permit. Conditions D.16.4 (a) and (b) implemented the operating limits in D.16.2. Condition D.1.16 (c) does not belong to this section; therefore these conditions have been deleted and marked as "Reserved".

D.16.2 ~~Emission Standards [CP157-4148]~~ **Reserved**

~~The sulfur dioxide (SO_2) emissions from the emission units in Building T71shall not exceed 16.7 tons per year to avoid the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). This emission limit correlates to a maximum sulfur containing compound (SCC) usage rate of 521 lbmoles equivalent per twelve consecutive month period using the following equivalency:~~

~~1 lbmole SCC equivalent = 1 lb mole SO_2~~

D.16.4 ~~Record Keeping and Reporting Requirements [CP157-4148 (Revised by this permit)]~~ **Reserved**

~~(a) The Permittee shall maintain SCC usage records on a calendar month basis to document compliance with the limitations established in Condition D.16.2.~~

~~(b) The Permittee shall submit quarterly summary reports of the monthly SCC usage records.~~

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

The above changes necessitated the changes in the following conditions:

(8) Condition D.1.6 (Now Condition D.1.5)

D.1.5 Testing Requirements [326 IAC 2-7-6(1), (6)] [40 CFR Part 63, Subpart DDDDD]

(b) No emissions testing is required for the boilers for compliance with particulate matter for boilers 4, and 5, ~~or sulfur dioxide or nitrogen oxides~~ emission limit~~s~~ established in Conditions D.1.1~~, D.1.2 and D.1.3, respectively~~, at this time. However, IDEM may require performance testing when necessary to determine compliance. The requirements for conducting performance tests are described in Section C – Performance Testing.

(9) Change Management and Flexible Permit Requirements - Quarterly Emission Limit Report has been revised to incorporate the PAL NOx and SO_2 limits as follows:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Sections F.1 **and G.1 –** Change Management and Flexible Permit Requirements**, and Plantwide Applicability Limitations Requirements**

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006
Facility: BPM Operations (RTOs, T79, T49, T149, Chemical WWTP, BPM Building Fugitives)
Parameter: BPM Operations Emission Limit for VOC, CO, NOx, SO_2, and Fluorides; T79 Fume Incinerator System Emission Sublimit for VOC
Limit:

Pollutant	BPM Operations (tons/yr)	T79 Fume Incinerator (tons/yr)
VOC	300	300
CO	150	30
NOx	300	30
SO_2	300	5
Fluorides	6	2

Facility: **Source wide**
Parameter: **Plantwide Emission Limits for NOx, and SO_2;**
PAL Limit:

Pollutant	**(Tons/yr)**
NOx	**637**
SO_2	**2,059**

The attached spreadsheet provides the monthly actual emissions for the BPM operations **and PAL NOx and SO_2 limits**. The information is used to determine compliance with the emission limits provided above. This emission summary report was:

Submitted by:_____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Source Name: Eli Lilly and Company, Tippecanoe Laboratories
Source Address: 1650 Lilly Road, Lafayette, Indiana 47909
Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909
Part 70 Permit No.: T157-6879-00006

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									
NOx									
SO_2									
Fluorides									
T79 Fume Incinerator System									
VOC, Point									
CO									
NOx									
SO_2									
Fluorides									
T49 Liquid Waste Incinerator									
VOC, Point									
CO									
NOx									
SO_2									
Fluorides									
T149 Solid-Liquid Waste Incinerator									
VOC, Point									
CO									
NOx									
SO_2									
Fluorides									
Chemical Wastewater Treatment Plant Operations									
VOC, Point									
BPM Building Operations									
VOC, Fugitive									
BPM Total									
VOC (Point+ Fugitive)									
CO									

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
NOx									
SO_2									
Fluorides									
Boilers									
NOx									
SO_2									
Foul Air Incinerator									
NOx									
SO_2									
Reciprocating Engines									
NOx									
SO_2									
Site Total PAL Limits									
NOx									
SO_2									

(10) The following reporting form has been deleted as it was associated with Condition D.1.2, which has been deleted.

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

~~**Section D.1 – Utilities Operations**~~
~~**Quarterly Fuel Oil Consumption Report**~~

~~Source Name: Eli Lilly and Company, Tippecanoe Laboratories~~
~~Source Address: 1650 Lilly Road, Lafayette, Indiana 47909~~
~~Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909~~
~~Part 70 Permit No.: T157-6879-00006~~
~~Facility: Boiler 5~~
~~Parameter: SO_2 emissions~~
~~Limit: Fuel Oil Usage Limit = 1,120,000 gal/12 consecutive month period~~

~~**Quarter:** _____ **Year:** _____~~

~~**Month**~~	~~**Monthly Fuel Oil Usage (Mgal/month)**~~	~~**12 Month Rolling Avg (Mgal/12 consecutive months)**~~	~~**SO_2 Emissions (tons/12 consecutive months)**~~

~~Check one of the following:~~

☐ ~~No deviation occurred in this quarter.~~

☐ ~~The following deviation/s occurred in this quarter.~~

~~Submitted by:~~ _____

~~Title / Position:~~ _____

~~Signature:~~ _____

~~Date:~~ _____

~~Phone:~~ _____

~~Attach a signed certification to complete this report.~~

(11) The following reporting form has been deleted as it was associated with Condition D.1.3, which has been deleted.

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

~~**Section D.1 – Utilities Operations**~~
~~**Quarterly Fuel Oil and Natural Gas Consumption Report**~~

~~Source Name: Eli Lilly and Company, Tippecanoe Laboratories~~
~~Source Address: 1650 Lilly Road, Lafayette, Indiana 47909~~
~~Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909~~
~~Part 70 Permit No.: T157-6879-00006~~
~~Facility: Boiler 5~~
~~Parameter: NOx emissions~~
~~Limit: Natural Gas Usage Limit = 780 MMCF/12 month consecutive month period,~~
~~In addition, to account for fuel oil usage, the following equivalency shall be used:~~
~~1 MMCF of Natural Gas = 5000 gallons of Fuel Oil~~

~~**Quarter:** _____ **Year:** _____~~

~~**Month**~~	~~**Natural Gas Consumed (MMCF/month)**~~	~~**Fuel Oil Consumed**~~		~~**Month Rolling Avg (MMCF/12 months)**~~	~~**NOx Emissions (tons/12 months)**~~
		~~**(gal/month)**~~	~~**(MMCF/month)**~~		

~~Check one of the following:~~

~~☐ No deviation occurred in this quarter.~~

~~☐ The following deviation/s occurred in this quarter.~~

~~Submitted by: _____~~

~~Title / Position: _____~~

~~Signature: _____~~

~~Date: _____~~

~~Phone: _____~~

~~Attach a signed certification to complete this report.~~

(12) The following reporting form has been deleted as it was associated with Condition D.16.2, which has been deleted.

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

~~Section D.16 – Research and Development Operations~~
~~Quarterly SCC Usage Report~~

~~Source Name: Eli Lilly and Company, Tippecanoe Laboratories~~
~~Source Address: 1650 Lilly Road, Lafayette, Indiana 47909~~
~~Mailing Address: 1650 Lilly Road, Lafayette, Indiana 47909~~
~~Part 70 Permit No.: T157-6879-00006~~
~~Facility: Building T71~~
~~Parameter: Sulfur Dioxide (SO_2)~~
~~Limit: 521 lb-moles SCC per 12 month period, rolled on a monthly basis~~

~~Quarter:~~ _____ **~~Year:~~** _____

~~Month~~	**~~Actual SCC Use (lb-mol)~~**	**~~Consecutive 12-month use (lb-mol)~~**

~~Submitted by:~~ _____

~~Title / Position:~~ _____

~~Signature:~~ _____

~~Date:~~ _____

~~Phone:~~ _____

~~Attach a signed certification to complete this report.~~

(13) The following revisions were made to the Emission Statement condition to incorporate the revisions to 326 IAC 2-6 that became effective March 27, 2004. The revised rule was published in the April 1, 2004 Indiana Register. (04/16/04)

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

~~(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:~~

(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 ~~criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting)~~ **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 purposes of Part 70 fee assessment.

~~(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:~~

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, ~~P.O. Box 6015~~
Indianapolis, Indiana ~~46206-6015~~ **46204-2251**

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

(**b**~~c~~) The ~~annual~~ 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.

(14) B.2 Permit Term was revised to clarify that the revisions, modifications or amendments do not affect the expiration date of the Part 70 permit.

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

(a) This permit, **T157-6879-00006**, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date **of this permit**.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(15) A statement was added to B.8 Certification in order to clarify that the certification form may cover more than one document that is submitted.

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

(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.**

---

(16) B.16 Permit Renewal has been revised.

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, ~~P.O. Box 6015~~
Indianapolis, Indiana 4620**4**~~6-6015~~ **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.~~

(17) Clarification has been added to (e) of C.18 (Previously C.22) General Reporting Requirements.

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

(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 year" means the twelve (12) month period from January 1 to December 31 inclusive.**

(18) A new condition is added in the B section.

B.26 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

(19) Changes to the record keeping and reporting requirements have been made to reflect NSR reform provisions at major sources.

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

- -

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

(1) construction of the "project" (as defined in 326 IAC 2-2-1 (qq) 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

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

(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C.17 for any "project" (as defined in 326

IAC 2-2-1 (qq)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C.17 exceed the baseline actual emissions, as documented and maintained under Section C.17(c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C.17(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 (c)(2) and (3) in Section C.17.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).

(4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C.17 available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

(20) Conditions C.1, D.1.1 (d) and D.3.3 have been revised and Condition C.1(a) has been removed due to the fact that 326 IAC 6-3-2 has been approved into the SIP.

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour ~~[40 CFR 52 Subpart P]~~[326 IAC 6-3-2]

~~(a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any manufacturing process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.~~

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

6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. ~~This condition becomes federally enforceable upon approval by EPA of 326 IAC 6-3-2 as part of the federally approved State Implementation Plan (SIP); until then, this term is only state-enforceable.~~

D.1.1 Particulate Matter (PM) Limitations [326 IAC 6-2-3, 326 IAC 6-3, and PC (79) 1510 Issued March 22, 1982]

(d) Pursuant to 326 IAC 6-3-2 ~~and 40 CFR 52 Subpart P~~, particulate matter emissions from the ash handling system shall not exceed 3.83 pounds per hour based on a maximum throughput of 0.902 tons of ash per hour.

D.3.3 Particulate Matter (PM) Emission Limitations ~~[40 CFR 52, Part P]~~

Pursuant to ~~40 CFR 52 Subpart P and~~ Registration 157-3220 Issued September 3, 1993, Registration 157-4466 Issued May 8, 1995, and Registration 157-7144 Issued December 4, 1996, the emission units presented in the table below shall not exceed the following particulate matter emission rates based on the following maximum throughput rates:

(21) Condition B.19 has been revised and a statement concerning backup fuel switches is being added to B.19 Operational Flexibility **.**

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

(a) ---

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

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue~~, P. O. Box 6015~~
Indianapolis, Indiana ~~46206-6015~~ **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~~, on a rolling five (5) year basis,~~ all such changes and emission~~s trading~~ **trades** that are subject to 326 IAC 2-7-20(b), (c), or (e)**.** ~~and makes~~ **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).

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

(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.

(22) Upon further review, IDEM has determined that once per day monitoring of the control device (or of visible emission notations) is generally sufficient to ensure proper operation of the control device. IDEM has also determined that monitoring these parameters once per day is sufficient to satisfy the requirements of the Part 70 rules at 326 IAC 2-7-5 and 326 IAC 2-7-6.

D.1.11 Visible Emission Notations

(a) Visible emission notations of the stack exhausts of Boilers 1, 2 and 3 shall be performed ~~two times~~ once per day during normal daylight operations ~~when exhausting to the atmosphere~~. ~~A minimum 6-hour period shall separate the two daily readings for each boiler.~~ A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) The Compliance Response Plan for the boilers shall contain troubleshooting contingency and response steps for when an abnormal emission**s** is observed

(23) Table of Contents was revised.

Conclusion and Recommendation

The operation of this proposed modification shall be subject to the conditions of the attached proposed Plantwide Applicability Limitations (PAL) Permit and Part 70 Significant Permit Modification No. 157-12811-00006. The staff recommends to the Commissioner that this Part 70 Significant Permit Modification be approved.

Appendix A

Baseline Actual Emissions and Proposed PAL Limits

Tippecanoe Laboratories is a multi-faceted operation. It is primarily a manufacturing center that produces both human medicines and animal health products. In addition, it includes process development facilities that scale up the manufacturing process from small-scale pilot plants to full-sized manufacturing. The site also includes a variety of support operations such as solvent storage, solvent recovery, boilers, generators, compressor engines, waste incinerators, and wastewater treatment facilities.

The bulk pharmaceutical manufacturing [BPM] facilities produce human medicines, generally through chemical synthesis of the molecules followed by various purification and drying steps. Emissions from these production buildings are vented to the site's regenerative thermal oxidizers [RTOs]. BPM operations are supported by the solvent storage tank systems, the solvent recovery operations, the chemical wastewater treatment operations, and the waste incinerators. Emissions from the solvent recovery area and most of the solvent storage tanks are vented to the T79 Fume Incinerators. Some storage tanks are vented to the RTOs.

The sources of NOx and SO_2 emissions from these facilities are the combustion units: the RTOs, the T79 Fume Incinerators, and the two waste incinerators. The BPM production processes may generate small quantities of NOx and SO_2 emissions as the result of chemical reactions, but all such emissions are sent to the RTOs.

The animal health production facilities manufacture products through fermentation and extraction from the fermentation process. These products are also purified and dried before completion. The solvents and waste materials from these processes are also stored in the tanks. The only emission unit in this part of the plant that emits either NOx or SO_2 is the T174 Thermal Research Incinerator, which is used to burn off fumes from the fermentation waste storage tanks after the fumes have had the hydrogen sulfide removed by the Iron Sponge Scrubber.

The primary source of NOx and SO_2 emissions at the site are three coal-fired boilers that provide steam for both the BPM and animal health production facilities and other operations at the site. In addition, the site has two natural gas boilers [with fuel oil backup] that emit NOx and SO_2. The site also operates several small internal combustion engines which are used for emergency and stand-by electrical generation and air compressors.

Emissions units

The permit organizes the listing of emissions units as they are currently organized in the existing Title V permit for Tippecanoe Laboratories. Only the emission units at the site with the potential to emit NOx or SO_2 are involved in this PAL permit.

For the BPM production operations, each building has the potential to generate NOx and SO_2 emissions as the result of the chemical reactions. All of these emissions, however, are vented to the RTOs during normal operations. As a result, any NOx and SO_2 generated by BPM production operations are emitted as part of the RTO NOx and SO_2 emissions. As a result of this physical configuration, Lilly has considered the RTOs and the BPM production buildings to be a single emission unit.

The BPM support operations, such as solvent recovery equipment, the solvent and waste storage tanks, or the chemical wastewater treatment operations do not emit NOx or SO_2 directly. The emission control system for these areas, the T79 Fume Incinerators, however, can generate NOx and SO_2 emissions from the combustion operations. As a result, the support operations and the T79 fume incinerators are described as a single emission unit.

The tables on the following pages provide the required information.

Table 1: Site Emissions Units

Emission Unit ID	Description	Applicable requirements
T6 BLR001	92 MMBtu/hr Coal boiler #1	See Section D.1 of Title V permit
T6 BLR002	92 MMBtu/hr Coal boiler #2	See Section D.1 of Title V permit
T6 BLR003	92 MMBtu/hr Coal boiler #3	See Section D.1 of Title V permit
T6 BLR004	142 MMBtu/hr Natural gas/fuel oil boiler #4	See Section D.1 of Title V permit
T6 BLR005	97 MMBtu/hr Natural gas/fuel oil boiler #5	See Section D.1 of Title V permit
T6 T121	1250 KW Diesel generator	See Section D.2 of Title V permit
T5*	380 HP Diesel generator	No specific applicable requirements
T62*	1100 KW Diesel generator	No specific applicable requirements
T135*	390 HP Diesel generator	No specific applicable requirements
T78*	58 KW Diesel compressor	No specific applicable requirements
T89-1*	58 KW Diesel compressor	No specific applicable requirements
T89-2*	58 KW Diesel compressor	No specific applicable requirements
T174	Thermal Research Fume Incinerator	No specific applicable requirements
T49	Liquid waste incinerator	See Section D.12 of the Title V permit
T149	Rotary Kiln liquid/solid incinerator	See Section D.13 of the Title V permit
RTOs 1 and 2	Regenerative Thermal Oxidizers for emissions control of pharmaceutical manufacturing facilities	See Section D.14 of the Title V permit
T79 INC309 and T79 INC 310	T79 Fume incinerators for VOC emissions control of BPM support operations	See Section D.15 of the Title V permit
T71	T71 Pilot Plant	See Section D.16 of the Title V permit

Baseline Actual Emissions/Proposed PAL limit

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

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

The baseline actual emissions are expressed by the following equation:

Baseline actual emissions = Average actual emissions from any 24 month period of last 10 years [includes fugitive emissions, and SSM event emissions]

- any noncompliant emissions that occurred during the 24 month period

- adjustment for applicability of new requirements since baseline period

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

The PAL emission level is expressed by the following equation:

PAL emission level = Baseline actual emissions [as adjusted]

- emissions from emission units that have been shut down since baseline period

+ potential to emit of emissions units that have started up since baseline period

+ significant emission increase [40 tpy for both NOx and SO_2]

Proposed baseline period

For both NOx and SO_2 Lilly has proposed a baseline period of the 24 month period beginning January 1, 1996 and ending December 31, 1997.

Baseline actual emissions

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

The only NOx or SO_2 emission limits that have gone into effect since the baseline period are the NOx and SO_2 BACT limits that apply to the RTOs and the T49 Incinerator. The NOx limits did not require any emission control equipment or change in operational practice for these two units. SO_2 emissions from these units during the proposed baseline period were negligible, and are included as 0 ton/year in the baseline estimates. Therefore, no downward adjustments to baseline actual emissions were necessary.

(1) Coal-fired boilers #1, #2, & #3

Baseline actual emissions for the coal-fired boilers are based on the number of tons of coal actually burned in 1996 and 1997. For NOx emissions, the emissions were calculated based on the site-specific NOx emission factors Lilly developed from stack testing performed in the spring of 2005. The emission factors were developed for different operating rates for the boilers: approximately 55% of full load, approximately 70% of full load, and near full load.

These average emission factors are described in the table below:

Table A-1: Site specific NOx emission factors for coal-fired boilers

Operating rate	Site-specific NOx emission factor [lb NOx/MMBtu]	Site-specific NOx emission factor [lb NOx/ton coal]
~ 55% load	0.62	14.8
~ 70% load	0.55	13.1
~ 100% load	0.46	11.0

Lilly has historical steam production data that shows Lilly operates its boilers the majority of time in the 65% to 80% of load range [this scenario occurs about 60% of the time]. The boilers are operated in the 50% to 65% load range about 30% of the time, and operated at greater than 80% load about 10% of the time.

SO_2 emissions are based on the AP-42 emission factor of 38(S), where S=% sulfur of the coal [AP 42 Table 1.1-3]. The average coal sulfur content in 1996 and 1997 was 1.36%.

Table A-2: Coal-fired boiler actual emissions 1996-1997

Boiler #	**% of time operated at load**	**Coal burned [ton/yr]**		**Load specific NOx emission factor [lb/ton coal]**	**NOx emissions [ton/yr]**		**SO_2 emission factor [lb/ton coal]**	**SO_2 emissions [ton/yr]**	
		1996	**1997**		**1996**	**1997**		**1996**	**1997**
Boiler 1 @ low load	30%	7545	7357	14.8	55.8	54.4	38(S)	195.0	190.0
Boiler 1 @ medium load	60%	15090	14714	13.1	98.8	96.4	38(S)	389.9	380.0
Boiler 1 @ high load	10%	2515	2452	11	13.8	13.5	38(S)	65.0	63.0
Boiler 1 total		25150	24524		168.4	164.3		649.9	633.0
Boiler 2 @ low load	30%	5349	7563	14.8	39.6	56.0	38(S)	138.2	195.0
Boiler 2 @ medium load	60%	10699	15125	13.1	70.1	99.1	38(S)	276.5	391.0
Boiler 2 @ high load	10%	1783	2521	11	9.8	13.9	38(S)	46.1	65.0
Boiler 2 total		17831	25209		119.5	169.0		460.8	651.0
Boiler 3 @ low load	30%	7140	5735	14.8	52.8	42.4	38(S)	184.5	148.0
Boiler 3 @ medium load	60%	14281	11471	13.1	93.5	75.1	38(S)	369.0	296.0
Boiler 3 @ high load	10%	2380	1912	11	13.1	10.5	38(S)	61.5	49.0
Boiler 3 total		23801	19118		159.4	128.0		615.0	493.0
Overall total		**66782**	**68851**		**447.3**	**461.3**		**1725.7**	**1777.0**

(2) Natural gas/oil fired boilers 4 & 5

Baseline actual emissions for Boilers #4 and #5 are based on the amount of natural gas and fuel oil actually burned in 1996 and 1997. Lilly used current AP-42 emission factors for natural gas and #2 fuel oil boilers to determine actual emissions during the baseline period.

Table A-3: Boiler #4 and Boiler #5 actual emissions 1996-1997

Boiler #	Fuel burned In 1996	Fuel burned in 1997	AP-42 NOx factor [lb/unit burned]	NOx Emissions		AP-42 SO_2 factor [lb/unit burned]	SO_2 emissions [ton/yr]	
				1996	1997		1996	1997
4 (natural gas)	82 MMcf	110 MMcf	280 lb/MMcf	11.48	15.4	0.6 lb/MMcf	0.02	0.03
4 (#2 fuel oil)	0	0	24 lb/1000 gallons	0	0	71 lb/1000 gallons	0	0
Total #4	---	--	--	11.48	15.4	--	0.02	0.03
5 (natural gas)	1 MMcf	4 MMcf	100 lb/MMcf	0.05	0.2	0.6 lb/MMcf	0.0003	0.0012
5 (fuel oil)	0	0	20 lb/1000 gallons	0	0	71 lb/1000 gallons	0.0	0.0
Total #5	---	--	--	0.05	0.2	--	0.0003	0.0012

(3) Diesel engines

Lilly does not have detailed records available to determine actual NOx and SO_2 emissions from each of the diesel engines during the baseline period. In the 1996 and 1997 annual emission statements, Lilly reported actual emissions for all diesel engines as a group. Those emissions are summarized below.

Table A-4: Diesel engine actual emissions as reported in 1996 and 1997 annual emission statements

Year	NOx [ton/yr]	SO_2 [ton/yr]
1996	10.5	0.82
1997	4.02	0.27

If the AP-42 emission factors found in AP-42 Table 3.3-1 are applied to the diesel fuel usage values for those years, the resulting emission levels are comparable to what was reported in the annual emission statements. Lilly proposes to use the actual emission values from fuel usage and the current AP-42 emission factors [Table B-5] as the baseline actual emissions for these generators.

Table A-5: Diesel engines actual emissions 1996-1997

Year	Diesel burned [gallons]	HHV of fuel [MMBtu/ gallon]	NOx emission factor [lb/MMBtu]	NOx emissions [tons]	SO_2 Emission factor [lb/MMBtu]	SO_2 emissions [tons]
1996	36,000	0.137	4.41	10.8	0.29	0.7
1997	14,000	0.137	4.41	4.2	0.29	0.3

(4) T174 Thermal Research Incinerator

Lilly reported the following NOx and SO_2 actual emissions in its 1996 and 1997 Annual Emission statements:

Table A-6: T174 Incinerator actual emissions as reported in Annual Emission Statement

Year	NOx [ton/yr]	SO_2 [ton/yr]
1996	6.2	15.7
1997	4.7	15.3

These emissions are based on the 1996 stack test results referred to in the discussion of potential emissions for the T174 incinerator. Lilly based these estimates on the maximum concentration of the pollutants measured in the 1996 stack tests and an actual exhaust flow of 25,000 cfm [compared to the maximum flow of 44,000 cfm].

Lilly has attempted to calculate the actual emissions during this time using a different method and other available information. Lilly reported it burned 81 million cubic feet of natural gas in this incinerator in both 1996 and 1997. The maximum amount of natural gas the unit can burn, based on design capacity [11,400 cubic feet natural gas/hr], is 100 million cubic feet per year. Based on natural gas usage, Lilly operated the T174 incinerator at 81% capacity in 1996 and 1997. If a ratio of 0.81 is applied to the potential NOx and SO_2 emissions, the resulting actual emissions estimate is 8.8 tons/yr of NOx and 16.2 tons/yr of SO_2.

These values are slightly higher than the values reported in the Annual Emission Statement. Lilly proposes to use the values reported in the Annual Emission Statement since this will result in a lower Baseline Actual Emission value.

(5) T49 Incinerator

Lilly reported the following NOx and SO_2 actual emissions in its 1996 and 1997 Annual Emission Statements:

Table A-7: T49 Incinerator actual emissions as reported in Annual Emission Statement

Year	Waste burned [tons]	NOx [ton/yr]	SO_2 [ton/yr]
1996	24,840	20.9 *	0.0
1997	21,380	17.6	0.0

*The IDEM i-Steps data sheet for Tippecanoe Laboratories for 1996 indicates that NOx emissions from T49 were 124 tpy. This is not the value Lilly has in its records and Lilly believes the discrepancy is due to an i-Steps emission factor override. Lilly has agreed to accept 20.9 tpy as baseline emissions from T49 incinerator for the 1996 year.

Although SO_2 emissions were probably greater than 0.0 tpy during the baseline period, Lilly does not have adequate records to determine SO_2 emissions from the T49 incinerator during the baseline period. For purposes of this application, baseline actual emissions of SO_2 from the T49 incinerator are assumed to be 0.0 tpy.

NOx emissions from the T49 incinerator during this time period were based on the quantity of waste burned and regular analysis of the composition of the waste. This process took into account the NOx created as a result of the combustion air, and the NOx created when nitrogen-containing solvent wastes were burned and some of the nitrogen is converted to NOx.

Lilly currently uses CEMS to measure NOx emissions from this incinerator.

(6) RTOs

Actual NOx emissions for the RTOs are based on CEMS measurements taken during those years. The CEMS data shows that in 1996 the RTOs emitted 28.06 tons of NOx and in 1997, emissions were 28.7 tons. SO_2 emissions from the RTOs in these years were negligible.

Table A-7: RTO Actual emissions 1996-1997

Year	CEMS measured NOx emissions [tons]	SO_2 emissions [tons]
1996	28.1	0.0
1997	28.7	0.0

(7) T79 Fume Incinerators

SO_2 emissions from the T79 fume incinerators during 1996 and 1997 were negligible because very few sulfur containing fumes were burned during this period, and the scrubber on the incinerator further reduced SO_2 emissions. For purposes of this application, SO_2 emissions from T79 are not included. This results in a lower baseline actual emission rate of SO_2.

NOx emissions are caused almost exclusively from natural gas combustion in the incinerator. Any NOx emissions resulting from the combustion of nitrogen-containing solvents are not included. This results in a lower baseline actual emission rate. NOx emissions were determined by multiplying the actual natural gas usage for the incinerators during 1996 and 1997 times an emission factor of 50 lbs NOx per million cubic feet of natural gas burned. This is the emission

factor the site is required to use to calculate actual emissions for purposes of demonstrating compliance with the flexible permit emission cap [Condition F.1.5(b)(1)]. This is a lower emission factor than the site used when originally reporting emissions for 1996 and 1997. This results in a lower baseline actual emission rate.

Table A-8: T79 Fume Incinerator Actual emissions 1996-1997

Year	Natural gas burned	NOx emission factor lb NOx/MMcf	NOx emissions [tons]	SO_2 emissions [tons]
1996	35 MMcf	50 lb NOx/MMcf gas burned	0.9 ton	0.0
1997	39 MMcf	50 lb NOx/MMcf gas burned	1.0 ton	0.0

(8) T27, T53, T54, and T57 Production buildings

T27 is a bulk pharmaceutical production building that occasionally runs processes that emit either NOx or SO_2. Prior to the issuance of the flexible Title V permit, Lilly calculated emissions for this building based on process knowledge [stoichiometry, ideal gas law equations, and other engineering knowledge]. The actual emissions for this building during 1996 and 1997 are shown in the table below. The underlying basis for the emission rates can be found in detailed process records. Lilly believes that the 1996 and 1997 annual emission statements accurately reflect the best estimate of emissions for this operation since the emission estimates were completed at or near the time the processes were run. Lilly does not believe there is value in looking beyond the annual emission statements for this source since the actual emissions were so low and contribute very little to the baseline actual emission level. For compliance demonstration purposes under the PAL, T27 NOx and SO_2 emissions are reported within the RTO emissions since all emissions are currently routed to the RTOs.

Likewise, Lilly proposes to use the 1996 and 1997 annual emission statements as the basis for the NOx and SO_2 emissions from buildings T53, T54, and T57. These buildings were part of an herbicide production operation that was discontinued in 1996. The buildings were demolished shortly thereafter. As with T27, Lilly believes the 1996 and 1997 annual emission statements accurately reflect the best estimate of emissions for these operations since the emission estimates were completed at or near the time the processes were run. Again, there is no value gained in looking beyond these reports to obtain any greater accuracy to the baseline emission level.

The table below shows the emissions from these operations during the baseline period.

Table A-9: T27, T53, T54, and T57 actual emissions as reported in Annual Emission Statement

Year	Production rate/throughput		NOx emissions		SO_2 emissions	
	1996 [tons]	1997 [tons]	1996 [tons]	1997 [tons]	1996 [tons]	1997 [tons]
T27	122	235	1.97	1.97	0.61	3.00
T53	3504	0.00	3.20	0.00	2.50	0.00
T54	7154	0.00	4.40	0.00	0.00	0.00
T57	3405	0.00	3.10	0.00	0.00	0.00

(9) T71 Pilot Plant

For purposes of establishing baseline actual emissions, Lilly proposes to not include the low emissions from the T71 pilot plant. This facility began operating sometime after July 1996, when Lilly submitted the affidavit of construction for these facilities. Although some NOx and SO_2 emissions from these facilities probably occurred, they would have been so low that the effort to determine these emissions is greater than the benefit it provides to Lilly as part of the baseline actual emissions. As described earlier, NOx potential emissions were estimated to be 0.1 ton/yr. The SO_2 potential emissions were described as 1.5 ton/yr, but this value does not reflect the application of scrubbers to voluntarily reduce SO_2 emissions. The scrubbers Lilly employs are designed to reduce SO_2 emissions by 95%. If Lilly operated the T71 pilot plant to its full potential during this time period [not likely since it was just starting up], actual SO_2 emissions, after the application of the scrubbers, would have been less than 0.1 ton/yr. For a more in depth analysis of these emission estimates, see the sample calculation that was included in the original permit application, which is shown below:

The baseline emissions for the period January 1, 1996 to December 31, 1997 are summarized in the table below. This table includes emissions units that have since been taken out of service, and which are deducted from the proposed PAL limits later in this application.

Table A-10: Baseline actual emissions from proposed baseline period [1996-1997]

Emission unit ID	Description	NOx		SO_2	
		1996 emissions [tons]	1997 emissions [tons]	1996 emissions [tons]	1997 emissions [tons]
T6 BLR001	Coal boiler #1	168.4	164.3	649.9	633.0
T6 BLR002	Coal boiler #2	119.5	169	460.8	651.0
T6 BLR003	Coal boiler #3	159.4	128.0	615.0	493.0
T6 BLR004	Natural gas/fuel oil boiler #4	11.48	15.4	0.0	0.0
T6 BLR005	Natural gas/fuel oil boiler #5	0.1	0.0	0.0	0.0
	Diesel Engine Group	10.8	4.2	0.7	0.3

Emission unit ID	Description	NOx		SO_2	
		1996 emissions [tons]	1997 emissions [tons]	1996 emissions [tons]	1997 emissions [tons]
T174	Thermal Research Incinerator	6.2	4.7	15.7	15.3
T49	Liquid waste incinerator	20.9	17.6	0.0	0.0
RTO1 and RTO2	Regenerative Thermal Oxidizers	28.1	28.7	0.0	0.0
T79 INC309 and T79 INC 310	T79 Fume incinerators	0.9	1.0	0.0	0.0
T71	T71 Pilot Plant	< 0.1	< 0.1	1.52	1.52
T27	T27 Production building	2.0	2.0	0.6	3.0
T53	T53 Production building	3.2	0.0	2.5	0.0
T54	T54 Production building	4.4	0.0	0.0	0.0
T57	T57 Production building	3.1	0.0	0.0	0.0
	Total for site	538.6	535.0	1,746	1,796
	Baseline actual emissions	537 tons		1,771 tons	

Because there are no deductions to be taken for non-compliant emissions or new applicable requirements, the baseline actual emissions for the period January 1, 1996 to December 31, 1997 are 537 tons/year for NOx and 1771 tons/year for SO_2.

The Proposed PAL level

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

Since the baseline period, Lilly has installed several BPM process tanks for which there were potential NOx or SO_2 emissions as part of the construction permit review process. Because these tanks are tied into the RTO, Lilly is considering them to be part of the RTO emission unit and not adding their potential emission rate to the PAL emission level.

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

Table A-11: Proposed PAL level

	NOx (tons/yr)	**SO_2 (tons/yr)**
Baseline actual emissions	**537**	**1771**
Deduction for emission units taken out of service [average annual emissions during baseline period]		
T53 Production Building	- 1.6	- 1.3
T54 Production Building	- 2.2	0.0
T57 Production Building	- 1.6	0.0
Sum of deductions for shutdowns	**- 5.4**	**-1.3**
Increase for new emission units [Potential to emit]		
T149 Rotary Kiln Incinerator	76.5	250
Sum of potential to emit for new emission unit	**76.5**	**250**
Major NSR significant emission increase	**40**	**40**
Proposed PAL level	**648**	**2059**

Appendix B

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

Eli Lilly and Company, Tippecanoe Laboratories [Lilly] has submitted an application for a Title V Significant Permit Modification, pursuant to 326 IAC 2-7-12, in order to revise the permit to include provisions for Plant-Wide Applicability Limits [PAL] for nitrogen oxides [NOx] and sulfur dioxide [SO_2]. This application includes the information required by 326 IAC 2-2.4-3.

The proposed PAL for Tippecanoe Laboratories would establish PAL limits of 637 ton/year for NOx and 2059 ton/year for SO_2. The basis for these values is given in the Appendix A.

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

(1) Bulk pharmaceutical manufacturing [BPM] operations controlled by regenerative thermal oxidizers [RTOs]

(2) BPM support operations and the T79 fume incinerators

(3) T49 liquid waste incinerator

(4) T149 rotary kiln liquid/solid waste incinerator

(5) Utilities [boilers] and utility support operations

(6) Fermented products manufacturing facilities

(7) Fermented products support operations

(8) Research and development facilities

(9) Wastewater and waste transfer facilities

326 IAC 2-2.4-3 requires the applicant to include a listing of emission units at the site that emit PAL pollutants, and a description of whether the emissions units are small, significant, or major [based on the unit's potential to emit]. This rule also requires the applicant to establish calculation procedures to convert monitoring data to monthly and annual emission rates.

Emissions units

Pursuant to 326 IAC 2-2.4-3(1), Lilly must list all emissions units at the source with a designation of whether the emission unit is small, significant, or major – based on the potential to emit of the emission unit. Small emission units are units with potential to emit less than PSD significant thresholds. For both NOx and SO_2, this value is 40 tons per year. Therefore, any emission unit with potential to emit less than 40 tons per year of NOx or SO_2 will be considered a small emission unit. Significant emission units are units with potential to emit equal to or greater than PSD significant thresholds, but less than 100 tons per year. For this application, emission units with potential to emit NOx or SO_2 of at least 40 tons per year and less than 100 tons per year will be a significant emission unit. Major emission units are units with potential to emit equal to or greater than 100 tons per year.

In addition, this provision requires identification of all applicable requirements that apply to each emission unit. Because the applicable requirements for a complex site such as Tippecanoe Laboratories can be extensive, the table includes a reference to the relevant section of the site's Title V permit. This permit for Tippecanoe Laboratories contains far greater detail about the applicable requirements.

For the BPM production operations, each building has the potential to generate NOx and SO_2 emissions as the result of the chemical reactions. All of these emissions, however, are vented to the RTOs during the normal operations. As a result, any NOx and SO_2 generated by the BPM production operations are emitted as part of the RTO NOx and SO_2 emissions. As a result of this physical configuration, Lilly is considering the RTOs and the BPM production buildings to be a single emission unit.

The BPM support operations, such as solvent recovery equipment, the solvent and waste storage tanks, or the chemical wastewater treatment operations do not emit NOx or SO_2 directly. The emission control system for these areas, the T79 Fume Incinerators, however, can generate NOx and SO_2 emissions from the combustion operations. As a result, the support operations and the T79 fume incinerators are described as a single emission unit.

Potential to Emit Determinations.

(1) Coal-fired boilers #1, #2, & #3

Each of the three coal fired boilers is rated at 92 MMBtu/hr. For purposes of calculating PTE, Lilly used the AP-42 emission factors for spreader stoker boilers burning bituminous coal [AP-42 Section 1.1, Table 1.1-3]. These emission factors result in the highest PTE value for NOx when operating at maximum capacity. The site specific NOx emission factors developed from stack testing conducted in 2005, at maximum capacity are approximately the same as the AP-42 emission factors. [The site-specific NOx emission factor at full capacity is 0.46 lb/MMBtu. The AP-42 emission factor equates to 0.458 lb/MMBtu for coal with 24 MMBtu/ton heating value].

For SO_2, Lilly based PTE on the 6.0 lb/MMBtu emission limit found in 326 IAC 7-1.1-2 and Title V permit condition D.1.2(a).

Table B-1: Coal-fired boiler PTE

	Heat input Rating [MMBtu/hr]	Coal heat value [MMBtu/ton]	Max amount of coal burned [ton/hr]	AP-42 NOx factor [lb/ton coal]	NOx PTE [tons/yr]	SO_2 limit [lb/MMBtu]	SO_2 PTE [tons/yr]
1	92	24	3.83	11	184	6	2418
2	92	24	3.83	11	184	6	2418
3	92	24	3.83	11	184	6	2418

(2) Natural gas/oil fired boilers 4 & 5

The NOx PTE for boilers #4 and #5 is based on AP-42 emission factors for natural gas and #2 fuel oil boilers [280 lb NOx/MMcf natural gas and 24 lb NOx/1000 gallons #2 fuel oil]. SO_2 PTE is based on the emission limit specified in Title V permit condition D.1.2(b)

Historically, the NOx emissions from Boiler No. 4 and Boiler No. 5 have ranged from 5 to 15 tons and 0.5 to 2 tons per year, respectively. Lilly does not expect NOx emissions to vary much for these boilers because Lilly does not intend to use them much differently than they have in the past. These boilers serve as backup boilers for coal fired boilers, and continue to serve as back – up boilers when the coal fired boilers are replaced with natural gas fired boilers in the future. IDEM agrees with Lilly that there is no added value to stack test these units because, the NOx emission rates are not likely to be different than the AP-42 factors, so the resulting differences in emissions would have a minimal impact on the overall PAL emissions determination. IDEM has determined not to require stack testing these boilers, but to use the AP-42 emission factors for natural gas and #2 fuel oil.

Table B-2: Potential to emit for Boiler #4

Boiler #	Heat input Rating [MMBtu/hr]	Fuel heat value [MMBtu/unit]	Max amount of fuel burned [unit/hr]	AP-42 NOx factor [lb/unit burned]	NOx PTE [ton/yr]	SO2 emission factor or limit [lb/MMBtu]	SO2 PTE [ton/yr]
4 (natural gas)	142	1000 MMBtu/ MMcf	0.142 MMcf/hr	280 lb/MMcf	174	0.6 lb/MMcf	0.38
4 (#2 fuel oil)	142	0.137 MMBtu/gallon	1036 gallons/hr	24 lb/1000 gallons	109	0.5 lb/MMBtu	311
Highest	--	--	--	--	174	--	311

(3) Diesel engines

The PTE for diesel engines is based on AP-42 emission factors found in AP-42 Table 3.3-1 for engines smaller than 600 brake horsepower-hour and AP-42 Table 3.4-1 for the larger engines [0.5% sulfur is assumed for the larger engines]. For the T6/T121 generator, hours of operation are limited in the Title V permit to 900 hours per year. For the emergency generators, PTE is based on 500 hours per year of operation, as specified by USEPA guidance. For the diesel compressors, PTE is based on 8760 hours per year of operation.

Table B-3: Potential to emit for diesel engines

Engine	Service type	Capacity [bhp-hr]	Hours of operation	NOx emission factor [lb/bhp-hr]	NOx PTE [ton/yr]	SO_2 emission factor [lb/bhp-hr]	SO_2 PTE [ton/yr]
T6/T121	Electrical generator	1,676	900	0.024	18.1	0.00405	3.05
T5	Emergency generator	380	500	0.031	2.9	0.00205	0.19
T62	Emergency generator	1,475	500	0.024	8.9	0.00405	1.49
T135	Emergency generator	390	500	0.031	3.0	0.00205	0.20
T78	Compressor	77.7	8760	0.031	10.6	0.00205	0.70
T89-1	Compressor	77.7	8760	0.031	10.6	0.00205	0.70
T89-2	Compressor	77.7	8760	0.031	10.6	0.00205	0.70

(4) T174 Thermal Research Incinerator

Two factors contribute to SO_2 potential to emit for the T174 fume incinerator. First, as a natural gas burning unit, the trace amount of sulfur in natural gas is a source of SO_2. Second, the unit is primarily used to burn fumes from the iron sponge scrubber system – which is used to reduce total reduced sulfur emissions. Lilly is limited to emit no more than 2.28 lb/hour of total reduced sulfur [TV Synthetic Minor Condition D.5.3 for Total reduced sulfur (TRS)]. PTE for the incinerator then is based on 2.28 lb/hr of TRS converting completely to SO_2, with a trace addition of SO_2 from the natural gas combustion. The emission factor for SO_2 emissions in AP-42 Table 1.4-2 was used to estimate the natural gas contribution to SO_2 emissions.

Potential NOx emissions are based the results of a 1996 stack test performed on the T174 incinerator. In that test, the highest concentration of NOx measured was 7.9 ppm. If you assume this concentration is emitted at the maximum exhaust flow rate [44,000 cfm] for 8760 hours, the potential to emit of NOx [expressed as NO_2] is 10.9 tons/yr.

Table B-4: T174 Incinerator Potential to Emit of SO_2

Natural gas capacity [scf/hr]	TRS emissions from iron sponge [lb/hr]	SO_2 emissions from iron sponge [lb/hr]	SO_2 emission factor for natural gas Combustion [lb/MMcf]	SO_2 emissions from natural gas [ton/yr]	SO_2 emissions from iron sponge [ton/yr]	SO_2 PTE [ton/yr]
11,400	2.28	4.56	0.6	0.03	19.97	20.00

Table B-5: T174 Incinerator Potential to Emit of NOx

NOx ppm	Molecular weight [as NO_2]	Max Exhaust Flow rate [cfm]	NOx PTE [ton/yr]
7.9	46	44,000	10.9

(5) T49 and T149 Incinerators, RTOs

PTE for the T49 liquid waste incinerator, the T149 Rotary Kiln Incinerator, and the RTOs are based on the 24 hour BACT limits established for these units in the Title V permit. PTE is based on emitting for 8760 hours per year at the maximum exhaust flow rate. If this PTE would exceed the flexible permit annual emission cap, then the PTE will be equivalent to the annual emission cap. [These are noted with an asterisk in the table below.]

Table B-5: Potential to emit for T49 and T149 incinerators, RTOs

	NOx BACT Limit [ppm]	Molecular Weight [as NO_2]	Max Flow [cfm]	NOx PTE [ton/yr]	SO_2 BACT limit [ppm]	Molecular Weight	Max Flow [cfm]	SO_2 PTE [ton/yr]
T49	975	46	17,735	300*	500	64	17,735	300*
T149	170	46	14,340	76.5	400	64	14,340	250.5
RTOs	91	46	93,000	265.7	100	64	93,000	300*

(6) T79 Fume Incinerators

The PTE for the T 79 Fume incinerator is defined by the NOx and SO_2 emission limits in Condition F.1(c) and (d). These limits are 30 tons/yr and 5 tons/yr, respectively.

(7) T71 Pilot Plant

Lilly determined potential NOx and SO_2 emissions when it applied for the construction permit for T71 issued on December 20, 1995 [CP157-4148]. These potential emission estimates are based on ideal gas law equations for pharmaceutical production operations, but scaled down to reflect the very small size of the pilot plant operations [50 gallon vessels in T71 compared to 500 – 2000

gallon vessels used in production buildings]. The PTE estimates developed at that time represented worst case estimates for SO_2 emissions based on the amount of sulfur containing compounds that could result from reactions in the small process tanks in T71.

NOx PTE was calculated to be 0.1 ton/yr and SO_2 emissions were calculated to be 1.52 tons/yr. The SO_2 emissions are actually much less than this because they are controlled by scrubbers, which Lilly utilizes on a voluntary basis.

Table B-6: Site Emissions Units and Status [Emission units with NOx and SO_2 PTE only]

Emission unit ID	Description	NO_x PTE [ton/yr]	Status	SO_2 PTE [ton/yr]	Status	Applicable requirements
T6 BLR001	92 MMBtu/hr Coal boiler #1	184	Major	2418	Major	See Section D.1 of Title V permit
T6 BLR002	92 MMBtu/hr Coal boiler #2	184	Major	2418	Major	See Section D.1 of Title V permit
T6 BLR003	92 MMBtu/hr Coal boiler #3	184	Major	2418	Major	See Section D.1 of Title V permit
T6 BLR004	142 MMBtu/hr Natural gas/fuel oil boiler #4	174	Major	311	Major	See Section D.1 of Title V permit
T6 BLR005	97 MMBtu/hr Natural gas/fuel oil boiler #5	39.9	Small	39.9	Small	See Section D.1 of Title V permit
T6 T121	1250 KW Diesel generator	17.7	Small	3.0	Small	See Section D.2 of Title V permit
T5*	380 HP Diesel generator	2.9	Small	0.2	Small	No specific applicable requirements
T62*	1100 KW Diesel generator	8.9	Small	1.49	Small	No specific applicable requirements
T135*	390 HP Diesel generator	3.0	Small	0.2	Small	No specific applicable requirements
T78*	58 KW Diesel compressor	10.6	Small	0.7	Small	No specific applicable requirements
T89-1*	58 KW Diesel compressor	10.6	Small	0.7	Small	No specific applicable requirements
T89-2*	58 KW Diesel compressor	10.6	Small	0.7	Small	No specific applicable requirements
T174	Thermal Research Fume Incinerator	10.9	Small	20.0	Small	No specific applicable requirements
T49	Liquid waste incinerator	300	Major	300	Major	See Section D.12 of the Title V permit
T149	Rotary Kiln liquid/solid incinerator	76.5	Signif.	250	Major	See Section D.13 of the Title V permit

Emission unit ID	Description	NO_x PTE [ton/yr]	Status	SO_2 PTE [ton/yr]	Status	Applicable requirements
RTOs 1 and 2	Regenerative Thermal Oxidizers for emissions control of pharmaceutical manufacturing facilities	265.7	Major	300	Major	See Section D.14 of the Title V permit
T79 INC309 and T79 INC 310	T79 Fume incinerators for VOC emissions control of BPM support operations	30	Small	5	Small	See Section D.15 of the Title V permit
T71	T71 Pilot Plant	0.1	Small	1.5	Small	See Section D.16 of the Title V permit

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

Proposed monitoring and emission calculation requirements

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

(1) Mass balance calculations for activities using coatings or solvents

(2) Continuous emissions monitoring systems [CEMS]

(3) Continuous parametric monitoring systems [CPMS] or parametric monitoring systems [PEMS]

(4) Emission factors

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

Lilly proposes to utilize CEMS, emissions factors, and different alternative monitoring systems. Each of the monitoring systems is described in greater detail below and summarized in Table 6. In each case, Lilly would determine the amount of NOx and SO_2 emissions each month from the data collected. The monthly values would be used to determine the rolling 12-month emission rates for comparison to the PAL limits.

When CEMS are the proposed compliance determination method, Lilly intends to utilize CEMS in a manner consistent with 326 IAC 2-2.4-12(d). The CEMS that are proposed are currently in use and required under the existing site Title V permit.

In all cases where emissions factors are the proposed compliance determination method, Lilly proposes that none of the emissions factors need adjustment to address uncertainty or other limitations of the emission factor [326 IAC 2-2.4-12(f)(1)]. As explained below, IDEM agrees that none of the emission factors need adjustment. In addition, IDEM grants Lilly's request that IDEM determine, pursuant to 326 IAC 2-2.4-12(f)(3), that development of site-specific emissions factors for significant and major emission units within six months after the issuance of the PAL permit is not needed. The bases for granting these requests are described in greater detail below.

(1) Coal-fired boilers

Lilly proposes to use AP-42 emission factors to determine SO_2 emissions from the three coal-fired boilers and to use site-specific emissions factors that Lilly already developed for NOx.

For SO_2 emissions, Lilly will use the AP-42 emission factor of 38 times the % sulfur content [38(S)] lb SO_2 per ton coal burned [SCC # 1-01-002-04]. Lilly already collects and analyzes coal samples for purposes of determining coal-sulfur content. Lilly collects twice-daily samples of coal to create a monthly composite sample that is analyzed for sulfur content. The amount of coal burned in a month is also tracked. These coal sampling and usage requirements are already embodied in Section D.1 of the Title V permit.

This SO_2 emission factor does not need to be adjusted for uncertainty or other limitations. It is based on the conservative assumption that 97.5% of the sulfur in the coal converts to SO_2. The emission factor is widely accepted as accurate. It has an AP-42 rating of "B" and is equal to the highest emission factor for coal-fired boilers in general. The "B" rating is the result of the emission factor probably overestimating SO_2 emissions rather than underestimating emissions. Pulverized coal boilers have an SO_2 emission factor that is exactly the same [38(S)], while older, less efficient boiler types have lower emission factors. This is an indication that 38(s) represents the highest degree of sulfur to SO_2 conversion. For many of the units with a 38(S) emission factor, the factor is given an "A" rating. This leads to the conclusion that the uncertainty in the emission factor for spreader stoker boilers is that it may overestimate emissions.

IDEM grants Lilly's request to not require validation testing to develop site-specific SO_2 emission factors. As described above, the emission factor is conservative and may overestimate emissions. Second, Lilly will be operating the coal-fired boilers for only a short time after the issuance of the PAL permit. Lilly plans to shut down the coal-fired boilers no later than September 12, 2007 in order to comply with Boiler MACT requirements (TV Condition D.1.17). It is not practical to develop site specific emission factors that will be used for less than one year.

For NOx, Lilly proposes to use a site-specific emission factor developed in early 2005 in support of submitting this application (Page 4 of Appendix A). Although NOx emissions may vary depending on the operating rate [load] of the boiler, Lilly proposes to determine NOx emissions by using the highest NOx emission factor measured during these tests. This emission factor is 0.67 lb NOx/MMBtu heat input. For coal that has a higher heating value of 24 MMBtu/ton [the historical average for coal burned at Tippecanoe Laboratories, this equates to an emission factor of 16 lb NOx/ton of coal burned. Lilly proposes to track the amount of coal burned and to apply this emission factor to determine NOx emissions from the coal fired boilers.

Because this emission factor is site-specific based on recent actual stack test data, IDEM agrees that these emission factors do not need adjustment for uncertainty. IDEM also grants Lilly's request to not require Lilly to develop new site-specific emission factors after the PAL permit is issued.

(2) Natural gas/fuel oil boilers

Lilly proposes to use AP-42 emission factors to determine SO_2 and NOx emissions from the two natural gas/#2 fuel oil boilers.

For NOx emissions, Lilly will use the AP-42 emission factor of 280 lb NOx per million cubic feet of gas burned and 24 lb NOx per 1000 gallons of fuel oil burned. Lilly will measure the amount of natural gas and #2 fuel oil burned in each of the two boilers each month and apply those fuel consumption rates to the emission factors to determine actual emissions.

These NOx emission factors do not need to be adjusted for uncertainty or other limitations. The NOx natural gas emission factor has an "A" rating and is the highest of all the NOx emission factors for natural gas boilers. The NOx emission factor for #2 fuel oil has a low rating ["D"], but an adjustment is not needed because #2 fuel oil is a back up fuel that Lilly has not burned in either of these boilers in years. The low amount of fuel oil utilization, and therefore, the low

quantity of emissions from burning fuel oil serve as justification for using the AP-42 emission factors unchanged.

In addition, IDEM grants Lilly's request to not require validation testing to develop site-specific NOx emission factors for Boiler #4. [Boiler #5 is classified as a "Small" emission unit under the PAL, and therefore, no site-specific emission factors would be required under 326 IAC 2-2.4-12(f)(3).] As described above, the natural gas emission factor has an "A" rating and is the highest natural gas emission factor that could be used. Although the fuel oil emission factor has a "D" rating, the extremely low utilization of fuel oil makes it inappropriate to require development of a site specific emission factor for NOx. In addition, actual NOx emissions from Boiler #4 have historically been in the 5 tons/yr to 15 tons/yr range.

For SO_2 emissions, Lilly will use the AP-42 emission factor of 0.6 lb SO_2/per million cubic feet of gas burned and 142(S) lb SO_2 per 1000 gallons of fuel oil burned. Lilly will assume the sulfur content of the fuel oil is 0.49%, since this is the maximum amount of sulfur that the fuel oil could contain and be in compliance with 326 IAC 7-1.1-2 and the Title V permit. Lilly will measure the amount of natural gas and #2 fuel oil burned in each of the two boilers each month and apply those fuel consumption rates to the emission factors to determine actual emissions.

These SO_2 emission factors do not need to be adjusted for uncertainty or other limitations. The SO_2 natural gas emission factor has an "A" rating and reflects the low amount of sulfur in natural gas. The SO_2 emission factors for #2 fuel oil also have an "A" rating. Furthermore, an adjustment is not needed because #2 fuel oil is a back up fuel that Lilly has not burned in either of these boilers in years. The low amount of fuel oil utilization, and therefore, the low quantity of emissions from burning fuel oil serve as justification for using the AP-42 emission factors unchanged.

IDEM grants Lilly's request to not conduct validation testing to develop site-specific SO_2 emission factors for Boiler #4. [Boiler #5 is classified as a "Small" emission unit under the PAL, and therefore, no site-specific emission factors would be required under 326 IAC 2-2.4-12(f)(3).] As described above, the emission factors have "A" ratings and testing is not likely to yield significantly more accurate emission factors. In addition, because Boiler #4 is used primarily as a backup unit, the actual amount of utilization is low. Actual SO_2 emissions from Boiler #4 for the past several years are less than one ton per year.

(3) Diesel engines [emergency generators and compressors]

Lilly proposes to simplify its compliance monitoring requirements for the diesel engines by assuming that the actual emissions from these engines are equal to the potential to emit of the engines. This would represent the worst-case emissions, and substantially overestimate the actual emission from these units.

The permit will authorize Lilly to either use the potential to emit of the generators or to base actual emissions on actual hours of operation and AP-42 emission factors to determine SO_2 and NOx emissions from the seven diesel engines on site. Lilly will use the emission factors from AP-42 Table 3.4-1.

For NOx emissions, Lilly will use the AP-42 emission factor of 0.024 lb NOx/per brake horsepower-hour. Lilly will measure the number of hours each engine operates in a month and apply those hours to the emission factors to determine actual emissions.

For SO_2 emissions, Lilly will use the AP-42 emission factor of 0.0004045 lb SO_2/per brake horsepower-hour. Lilly will measure the number of hours each engine operates in a month and apply those hours to the emission factors to determine actual emissions.

These emission factors do not need to be adjusted for uncertainty or other limitations. The actual NOx and SO_2 emissions from these units in recent years have been very low [approximately 1 ton

NOx/year and a small fraction of a ton SO_2/year]. Any adjustments to the emission factor would not have a material impact on emissions reported under the PAL.

All of the engines are classified as "Small" emission units under the PAL, and therefore, no stack tests to develop site-specific emission factors are required under 326 IAC 2-2.4-12(f)(3).

(4) T174 Thermal Research Incinerator

Lilly also proposes to use a simple approach to determine NOx and SO_2 emissions from the T174 Thermal Research Incinerator. For NOx, Lilly proposes to determine emissions by assuming the unit emits NOx at its maximum emission rate for each hour of operation. The potential hourly emission rate would be based on the highest NOx concentration recorded in a 1996 stack test [7.9 ppm] and the maximum exhaust flow rate [44,000 cfm]. This results in a maximum hourly emission rate of 2.5 lb NOx/hr. Monthly emissions would be determined by multiplying the maximum hourly emissions by the actual hours of operation during the month.

Lilly is considering changes to the operation of the T174 incinerator that will greatly reduce air flow in the incinerator, and consequently reduce the exhaust flow rate. The changes being considered could reduce exhaust flow by more than 50%. The changes will likely reduce NOx concentrations too, since there will be less combustion air going through the incinerator, which will reduce the available nitrogen for conversion to NOx. Lilly will still use the 2.5 lb NOx per hour for compliance with the PAL NOx limit.

For SO_2 emissions, Lilly proposes to base actual emissions on the maximum amount of sulfur containing fumes that can enter the incinerator. Lilly would assume that 2.28 lb/hr of sulfur enters the incinerator and all of it is converted to SO_2. The 2.28 lb/hr rate is based on the total reduced sulfur [TRS] emission limit on the iron sponge scrubber in section D.5 of the Title V permit. The T174 incinerator is used periodically during the year to further reduce TRS emissions from the iron sponge unit. Using these assumptions results in an SO_2 emission rate of 4.56 lb/hr. Lilly proposes to track the hours of operation of the incinerator and to determine actual emissions by multiplying the hours by this worst case emission rate.

These emission factors do not need to be adjusted for uncertainty or other limitations. The emission factors represent worst case emission levels for the operation. Actual NOx and SO_2 emissions from these units in recent years are low [approximately 5 ton NOx/year and 15 - 20 ton SO_2/year]. Any adjustments to the emission factor would not have a material impact on emissions reported under the PAL.

The incinerator is classified as a "Small" emission unit under the PAL, and therefore, no site-specific emission factors are required under 326 IAC 2-2.4-12(f)(3).

(5) T49 and T149 Incinerators and the RTOs

Lilly proposes to determine actual NOx and SO_2 emissions from the T49 Incinerator, the T149 Rotary Kiln Incinerator, and the RTOs [which includes all the BPM buildings] using the same method Lilly is already required to use under Title V permit condition F.1.5(a) for NOx and F.1.6(a) for SO_2. This method involves measurement of NOx and SO_2 concentrations with CEMS and measurement of the exhaust flow rate. These values are multiplied to obtain an emission rate, and the monthly emissions are determined from the short term emission rates. When data from the CEMS or the exhaust flow monitor are not available or valid, Lilly will apply the data substitution provisions described in the existing permit conditions.

(6) T79 Fume Incinerators

Lilly proposes to determine actual NOx and SO_2 emissions from the T79 fume incinerators [which includes emissions from various BPM support operations] using the same methods Lilly is already

required to implement under Title V permit condition F.1.5(b) for NOx and F.1.6(b) for SO_2. The following paragraphs describe these methods.

Most of the emissions generated by these incinerators are the result of combustion of natural gas. Therefore, Lilly proposes to use the AP-42 emission factors for natural gas combustion in a small boiler with low-NOx burners [50 lb NOx/MMcf natural gas burned and 0.6 lb SO_2/MMcf natural gas burned]. This is the emission factor for an operation most comparable to a fume incinerator, and is the factor used in the current permit.

Additional NOx emissions could occur as a result of burning nitrogen containing solvent fumes in the incinerator. Lilly proposes to determine the additional NOx emissions by determining the amount of nitrogen containing solvent fumes entering the incinerator and assuming that 6% of the nitrogen in the fume stream converts to NOx. The amount of nitrogen containing solvent fumes will be determined by actual measurements, engineering calculations [i.e., ideal gas law equations, stoichiometry], or mass balance.

Likewise, additional SO_2 emissions could occur as a result of burning sulfur containing solvent fumes in the incinerator. Lilly proposes to determine the additional SO_2 emissions by determining the amount of sulfur containing solvent fumes entering the incinerator and assuming that 100% of the sulfur in the fume stream converts to SO_2. The amount of sulfur containing solvent fumes will be determined by actual measurements, engineering calculations [i.e., ideal gas law equations, stoichiometry], or mass balance.

SO_2 emissions are further reduced by applying a 95% SO_2 control efficiency to the emission calculations. The T79 fume incinerators are controlled by caustic scrubbers, which must meet 98% control efficiency for HCl for purposes of complying with Pharmaceutical MACT requirements. Using 95% control efficiency for SO_2 conservatively overestimates SO_2 emissions from the incinerators. The MACT rules and the Title V permit require Tippecanoe Laboratories to continuously monitor scrubber liquid pH, scrubber liquid recirculation flow rate, and scrubber caustic flow rate. Ranges that demonstrate compliance with the 98% HCl control efficiency requirement were established as part of a MACT compliance test, and are described in the site's Notification of Compliance.

These emission determination methods qualify as an alternative monitoring method pursuant to 326 IAC 2-2.4-12(a)(3). The fume incinerators are classified as a "Small" emission units under the PAL, and therefore, no site-specific emission factors are required under 326 IAC 2-2.4-12(f)(3).

(7) T71 Pilot Plant

Lilly proposes to base actual NOx and SO_2 emissions on an assumption that the building emits these pollutants in an amount equal to its physical potential to emit. For NOx, this is 0.1 ton/yr and for SO_2, this is 1.52 tons/yr. These amounts are based on potential emission calculations developed by Lilly in support of the construction permit for T71 obtained on December 20, 1995 [CP157-4148].

Buildings T31/T31A and T71

SO_2, NOx, and CO Sample Calculations

Calculation Basis

(1) Assume 100 lots/year for processes in T31/T31A and T71 emitting these pollutants.

Note that T71 will not be running 100 lots per year, but for the purposes of estimating emissions, T31/T31A emissions were scaled down for T71.

(2) Assume all emissions can come from one vessel or several vessels, but no more than a total of 100 lots per year of any process that emits each of these pollutants will run in T31/T31A or T71.

(3) Since process stoichiometry is based on bulk facility building scale, scale emissions from all processes down from size of bulk facilities (2,000 gallons) to size of T31/T31A (500 gallons) and T71 facilities (50 gallons).

Emission Calculation for SO_2:

Based on stoichiometry from process with worst case SO_2 emissions:

$$SOCl_2 + H_2O \longrightarrow SO_2 + 2HCl$$

(1023 kg $SOCl_2$/lot) x (kgmol $SOCl_2$/118.97 kg) x (kg_{mol} SO_2/kg_{mol} $SOCl_2$)
x (64.07 kg SO_2/kg_{mol} SO_2) x (2.2 lb/kg) = 1212 lb SO_2/lot

(1212 lb SO_2/lot) x (100 lot/yr) x (ton/2000 lb)
x (500 gallon/2000 gallon) = 15.15 tpy SO_2 T31/T31A (Uncontrolled)

(1212 lb SO_2/lot) x (100 lot/yr) x (ton/2000 lb)
x (50 gallon/2000 gallon) = 1.52 tpy SO_2 T71 (Uncontrolled)

T31/T31A emissions are vented to RTOs, which are controlled by caustic scrubbers.
Assume 95% control efficiency for RTO scrubbers for SO_2 emissions

15.15 tpy (1.0 – 0.95) = 0.76 tpy SO_2 T31/T31 (Controlled)

Emissions from T31/T31A are included in the emissions from RTOs.

The scrubber controlling the T71 is voluntary. Therefore, the SO_2 emissions from T71 will be determined as uncontrolled for complying with the PAL SO_2 limit.

1.52 tpy (1.0 – 0.0) = 1.52 tpy SO_2 T71 (Uncontrolled)

Emission Calculations for NOx:

Calculations are based on the stoichiometry of the process reactions which evolve nitrogen oxides (NOx). These emissions from these reactions are representative of nitrogen oxide evolving processes.

Reaction 1:

$NANO_2$	+	HCl	------→	HNO2	+	NaCl
Sodium Nitrite		Hydrochloric Acid		Nitrous Acid		Sodium Chloride

92.3 kilograms (kg) of $NaNO_2$ will be reacted with HCl, therefore:

(92.3 kg $NaNO_2$) x (1,000 g/1 kg) x (1 mol/69 g $NaNO_2$) = 1,338 mol HNO_2

1,338 mol $NaNO_2$ yields 1,338 mol HNO_2.

Reaction 2:

$N\text{-}NH_2$	+	HNO_2	-----→	N-H	+	N_2O	+	H_2O
Intermediate		Nitrous Acid		Intermediate		Nitrous Oxide		Water

Only half of the 1338 mol HNO_2 available reacts. Therefore, 669 mol of N_2O are formed, 669 mol of HNO_2 remain. Nitrous oxide (N_2O) is stable and inert.

Total NO_2 formed:

669 mol NO_2 Formed from unreacted HNO_2	-------→	669 mol NO_2 NO2 evolved/lot

(669 mol NO_2/lot) x (46.01 g/1 mol NO_2) x (1 lb/454 g) = 67.8 lb NO_2/lot

(67.8 lb NO_x/lot) x (100 lots/yr) x (ton/2,000 lb) x (500 gallon/ 2,000 gallon) = 0.85 tpy for T31/T31A (Uncontrolled)

(67.8 lb NO_x/lot) x (100 lots/yr) x (ton/2,000 lb) x (50 gallon/ 2,000 gallon) = 0.09 tpy for T71 (Uncontrolled)