



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: June 7, 2006  
RE: Eli Lilly & Company / 157-21809-00006  
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



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

Mitchell E. Daniels, Jr.  
 Governor

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 Commissioner

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

June 7, 2006

Re: 157-21809-00006  
 Significant Source Modification to  
 Part 70 Permit 157-6879-00006

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. An application to modify the emission source was received on September 19, 2005. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

Emission Unit ID	Emission Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
<i>Building T26:</i>					
BLR006	Natural Gas/Fuel Oil Boiler No 6	S-T26-BLR006	156.1	MMBtu/hr	None
BLR007	Natural Gas/Fuel Oil Boiler No 7	S-T26-BLR007	156.1	MMBtu/hr	None
T26-GEN-7500A	Natural Gas Powered Emergency Generator	S-T26-GEN-7500A	125	KW	None
T26-COMP 5600A	Diesel Powered Emergency Air Compressor	S-T26-COMP 5600A	125	HP	None

The following construction conditions are applicable to the proposed project:

- General Construction Conditions  
 The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
- This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- Effective Date of the Permit  
 Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
- Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The source may begin construction when the source modification has been issued. The source must comply with the requirements of 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12 before operation of any of the proposed emission units can begin.

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](mailto:tsinha@idem.IN.gov).

Sincerely,

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

Attachments

TPS

cc: File - Tippecanoe County  
Tippecanoe County Health Department  
Air Compliance Section Inspector - Wanda Stanfield  
Compliance Data Section  
Administrative and Development



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## PART 70 SIGNIFICANT SOURCE MODIFICATION

### 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 construct subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this Permit.

This approval 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.

Significant Source Modification No. 157-21809-00006	
Issued by: Original Signed By:  Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: June 7, 2006

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## SECTION B

### GENERAL CONSTRUCTION CONDITIONS

#### B.1 Permit No Defense

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This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated hereunder, as well as other applicable local, state, and federal requirements.

#### B.2 Effective Date of the Permit [IC13-15-5-3]

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Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

#### B.3 Revocation of Permits [326 IAC 2-1.1-8(5)]

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Pursuant to 326 IAC 2-1.1-8(5) (Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of the approval or if construction is suspended for a continuous period of one (1) year or more.

#### B.4 Modification to Construction Conditions [326 IAC 2]

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All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for modifications pursuant to 326 IAC 2.

#### B.5 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]

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(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.

## SECTION C

### SOURCE OPERATION CONDITIONS

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

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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.2 Opacity [326 IAC 5-1]

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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.

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

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

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- (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.

**SECTION D.20 FACILITY 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:

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

Emissions Unit ID	Emissions Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
<i>Building T26:</i>					
BLR006	Natural Gas/Fuel Oil Boiler No. 6	S-T26- BLR006	156.1	MMBtu/hr	None
BLR007	Natural Gas/Fuel Oil Boiler No. 7	S-T26- BLR007	156.1	MMBtu/hr	None
T26-GEN-7500A	Natural Gas Powered Emergency Generator	S-T26- GEN-7500A	125	KW	None
T26-COMP 5600A	Diesel Powered Emergency Air Compressor	S-T26- COMP 5600A	125	Hp	None

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

D.20.1 General Provisions Relating to NSPS and NESHAP [326 IAC 12-1] [40 CFR 60, Subpart A] [40 CFR 63, Subpart A] [326 IAC 20-1]

- (a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Boilers No. 6 and No.7 described in this section except when otherwise specified in 40 CFR Part 60, Subpart Db.
- (b) Pursuant to 40 CFR 63.7505, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for Boilers No. 6 and No.7, as specified in Appendix A of 40 CFR Part 63, Subpart DDDDD in accordance with the schedule in 40 CFR 63, Subpart DDDDD.

D.20.2 Opacity Limitations [326 IAC 5] [40 CFR 60.43b] [326 IAC 12] [326 IAC 2-7-24]

- (a) Notwithstanding Condition C.2, pursuant to 326 IAC 12 the opacity from Boilers No. 6 and No.7 shall not exceed 20% for any 6-minute block period, except for one 6-minute period per hour of not more than 27 percent opacity. Pursuant to 326 IAC 12, the opacity limit does not apply during periods of startups, shutdowns, or malfunctions. However, the general opacity requirements of Condition C.2 apply at all times. This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana law. This condition is not federally enforceable.
- (b) When starting up or shutting down Boilers No. 6 and No.7, opacity may exceed the applicable limit in Condition C.2. 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.

- (c) Pursuant to 40 CFR 60.43b(h)(5), because Boilers No. 6 and No. 7 will burn only very low sulfur fuel oil or natural gas, the boilers are not subject to opacity limitations in 40 CFR 60.43b(f) and (g).

D.20.3 Sulfur Dioxide (SO<sub>2</sub>) Limitations [326 IAC 7-1.1-2] [40 CFR 60.41b] [40 CFR 60.42b(k)]  
[326 IAC 12] [326 IAC 2-7-24]

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- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emission Limitations), 326 IAC 12, and 40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units):
  - (1) The SO<sub>2</sub> emission rate from Boilers No. 6 and No.7 shall not exceed ~~five tenths~~ 0.32 pounds per million Btu heat input; or
  - (2) The fuel oil shall contain no more than 0.3 weight percent sulfur.
  - (3) If the Permittee burns either natural gas or very low sulfur fuel oil, the Permittee shall be in compliance with Conditions D.20.3(a)(1) and (2).
- (b) Pursuant to 40 CFR 60 Subpart Db, the fuel oil sulfur content or sulfur dioxide emission limit applies at all times, including periods of startup, shutdown, and malfunction.

D.20.4 Nitrogen Oxides (NO<sub>x</sub>) Limitations [40 CFR 60.44b] [326 IAC 12]

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Pursuant to 40 CFR 60.44b(a), the NO<sub>x</sub> emission rate from Boilers No. 6 and No.7 shall not exceed 0.2 lb per MMBtu per boiler. The NO<sub>x</sub> emission limit shall be based on a 30-day rolling average. The NO<sub>x</sub> emission limit applies at all times, including periods of startup, shutdown, and malfunction.

D.20.5 Particulate Matter (PM) Limitations [40 CFR 63.7505] [40 CFR Subpart DDDDD, Table 1]  
[326 IAC 20-1] [326 IAC 6-2-4] [326 IAC 2-7-24]

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Pursuant to 40 CFR 63 Subpart DDDDD, Table 1, the PM emission rate from each of Boilers No. 6 and No.7 shall not exceed 0.03 pounds per MMBtu heat input. The particulate matter emission limit applies at all times except during periods of startup, shutdown, or malfunction.

D.20.6 Hydrogen Chloride (HCl) Limitations [40 CFR 63.7505] [40 CFR 63 Subpart DDDDD, Table 1]  
[326 IAC 20-1]

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Pursuant to 40 CFR 63 Subpart DDDDD, Table 1, the HCl emission rate from Boilers No. 6 and No.7 shall not exceed 0.0005 pounds per MMBtu heat input. The hydrogen chloride emission limit applies at all times except during periods of startup, shutdown, or malfunction.

D.20.7 Carbon Monoxide (CO) Limitations [40 CFR 63 Subpart DDDDD, Table 1] [40 CFR 63.7505]  
[40 CFR 63.7525] [40 CFR 63.7540] [326 IAC 20-1]

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- (a) Pursuant to 40 CFR 63, Subpart DDDDD, Table 1, CO emission rate from each of Boilers No. 6 and No.7 shall not exceed 400 ppm<sub>dv</sub> at 3% Oxygen based on a rolling 30-day average. The CO emission limit does not apply during periods of startup, shutdown, malfunction, or when boiler loads are below 50% (40 CFR 63.7540(a)(10)(ii)).
- (b) Pursuant to 40 CFR 63.7505(a), the Permittee must develop a written startup, shutdown,

and malfunction plan (SSMP) for Boilers No. 6 and No.7 according to the provisions in 40 CFR 63.6(e)(3).

D.20.8 PSD Minor Limitations for CO [326 IAC 2-2]

- (a) The total carbon monoxide emissions from Boilers No. 6 and No.7 shall be less than 98 tons per twelve consecutive month period with the compliance determined at the end of each month.

During the first twelve (12) months after startup of either Boilers No. 6 or No. 7, the total carbon monoxide emissions divided by the accumulated months of operation shall not exceed 8.17 tons up to a maximum total of 98 tons for the first twelve (12) months of operation of the boilers.

- (b) The hours of operation of the emergency air compressor shall be limited to 500 hours per year. The Permittee shall monitor the operating hours of the emergency air compressor with a non-resettable hour meter, as required by 40 CFR 60.4209(a).

Compliance with the CO emission limit of Boilers No. 6 and No.7, and the hours of operation of the emergency air compressor will render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this modification.

D.20.9 NSPS Capacity Limitations [AMP approval 11-22-2005] [326 IAC 12] [40 CFR 60, Subpart Db]

The amount of very low sulfur oil with a maximum sulfur content of 0.3%, burned in each of Boilers No. 6 and No. 7 shall be less than 976,740 gallons per year.

This will limit the very low sulfur oil annual capacity factors of Boilers No. 6 and No.7 to less than 10 percent. This fuel oil use limit will qualify fuel oil use as "infrequent use" under 40 CFR 60.13(i)(20), which is the requirement of an alternative monitoring plan (AMP) for opacity in lieu of installing continuous opacity monitoring systems.

A quarterly summary of the very low sulfur oil use report shall be submitted with the opacity excess emission report. Each quarterly report must be submitted within 30-days after the end of each quarter (January-March, April-June, July-September, and October-December).

This condition expires when the revisions made to 40 CFR 60 Subpart Db as amended on February 27, 2006, become effective as Indiana law. This condition is not federally enforceable.

D.20.10 Required Plans and Procedures [40 CFR Part 63, Subpart DDDDD] [326 IAC 20-1]

- (a) Pursuant to 63.7505(d), the Permittee shall develop and submit to the IDEM, OAQ for approval a site-specific monitoring plan that addresses paragraphs 40 CFR 7505 (d)(1)(i) through (iii). The Permittee must submit this site-specific monitoring plan at least 60 days before the initial performance evaluation of CMS.
- (b) Pursuant to 40 CFR 63 7505(e), the Permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in 40 CFR 63.6(e)(3).
- (c) Continuous Emission Monitor Standard Operating Procedures (CEMS SOP) – The Permittee shall prepare and implement a CEMS SOP for each required CEMS. The SOP for the CO monitor shall meet the requirements of 40 CFR 63.8(d) and (e).

D.20.11 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Boiler No. 6 and Boiler No.7.

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

D.20.12 Opacity Monitoring Requirements [U. S. EPA Alternative Monitoring Plan approval 11/22/2005]  
[326 IAC 12]

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- (a) At least six consecutive minutes of visible emission observations of the stack exhaust for Boilers No. 6 and No.7 must be conducted. These must be conducted at least once during each daylight shift during which fuel oil is being combusted. Visible emissions must be conducted when the maximum rate of fuel oil for that shift is being burned. The observer conducting the visible emissions must be certified to read visible emissions in accordance with the United States Environmental Protection Agency's Reference Method 9 (USEPA RM9).
- (b) At least six consecutive minutes of visible emissions must be conducted for each boiler whenever the respective boiler reaches the expected operating load after a cold start-up. These visible emissions readings must be conducted by an observer certified in accordance with USEPA RM9.
- (c) If visible emissions conducted in accordance with either condition (a) or condition (b) above identify an average opacity exceeding 10 percent, the observer must collect at least two additional sets of consecutive six minute visible emissions readings within that hour.
- (d) The Permittee must create records of visible emissions in accordance with 40 CFR 60.7. These records must include at least the date and time of visible emission observations along with the results of all readings and average calculated.
- (e) If at any time the annual capacity factor for burning very low sulfur oil is 10 percent or more, the Permittee will no longer qualify for this alternative opacity monitoring plan. The Permittee will then be required to propose a schedule for installing, certifying and operating continuous opacity monitoring system for each boiler identified above.

This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana law. This condition is not federally enforceable.

D.20.13 Compliance Requirements for SO<sub>2</sub> [326 IAC 7-2] [40 CFR 60.45b(j)] [40 CFR 60.47b(f)]  
[326 IAC 12]

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- (a) The Permittee shall burn only natural gas or very low sulfur fuel oil.
- (b) The Permittee shall demonstrate that the oil meets the definition of very low sulfur oil by:
  - (1) Following the performance testing procedures as described in 40 CFR 60.45b(c) or 40 CFR 60.45b(d); or
  - (2) Maintaining fuel receipts as described in 40 CFR 60.49b(r).

Compliance monitoring is not required when burning very low sulfur oil.

D.20.14 Initial Performance Test Requirements for NO<sub>x</sub> [40 CFR 60.46b] [326 IAC 12] [326 IAC 3-6-3]  
[326 IAC 2-7-24] [326 IAC 2-1.1-11] [40 CFR Part 60.8]

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- (a) Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup, the NO<sub>x</sub> emissions from Boilers No. 6 and No.7 shall be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate shall be used to determine compliance with the nitrogen oxides emission standards under 40 CFR 60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.
- (b) Subsequent performance test shall be performed upon request by IDEM, OAQ [40 CFR 60.46b (e) (4)].

D.20.15 Initial and Continuous Compliance Requirements for PM, HCl and CO [40 CFR 63.7506]  
[40 CFR 63.7510] [40 CFR 63.7530] [40 CFR 63.7540] [326 IAC 20-1]

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- (a) The Permittee must demonstrate initial compliance with the emission limits of PM and HCl and CO work practice standard no later than 180 days after startup of the source.
- (b) To demonstrate initial compliance with the emission limits of PM and HCl, the Permittee must include a signed statement in the Notification of Compliance Status report required in 40 CFR 63.7545(e) that indicates the Permittee burns only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels in Boilers No. 6 and No.7.
- (c) To demonstrate continuous compliance with the emission limits of PM and HCl, the Permittee must keep records that demonstrate that the Permittee burns only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels in Boilers No. 6 and No.7. The Permittee must also include a signed statement in each semiannual compliance report required in 40 CFR 63.7550 that indicates the Permittee burns only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels, during the reporting period.
- (d) To demonstrate initial compliance with the work practice standard for CO, the Permittee shall conduct a performance evaluation of the continuous emission monitoring system for carbon monoxide according to 40 CFR 63.7525(a).
- (e) To demonstrate continuous compliance with the work practice standard for CO, the Permittee shall meet the requirements of 40 CFR 63.7540(a)(10).

D.20.16 Continuous Emission Monitoring System (CEMS) Requirements [40 CFR 60.13] [40 CFR 60.48b]  
[40 CFR 63.7525] [40 CFR 63.8] [326 IAC 2-1.1-11] [326 IAC 2-7-24] [326 IAC 3-5]  
[40 CFR 60.48b (e) (2)] [326 IAC 12] [326 IAC 20-1]

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- (a) NO<sub>x</sub> CEMS Operation Requirements – The following requirements shall apply to Boilers No. 6 and No.7 when burning natural gas and/or fuel oil:
  - (1) The Permittee shall install, calibrate, maintain, evaluate, and operate the NO<sub>x</sub> CEMS in accordance with the procedures in 40 CFR 60.13 and 40 CFR 60, Appendix F. The span value for the NO<sub>x</sub> CEMS shall be 500 ppm. If an Alternative Monitoring Plan (AMP) is approved per 40 CFR 60.13(i), then the conditions in the AMP shall be followed.
  - (2) The CEMS shall be operational upon startup of the boilers.
  - (3) Continuous operation is defined as one data point every 15-minute period.

- (4) The NO<sub>x</sub> emissions shall be calculated using stack flow data, or an appropriate F-Factor per 40 CFR 60 Appendix A, Method 19.
  - (5) The Standard Operating Procedure (SOP) shall include procedures to obtain emission data when nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments. The emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.
  - (6) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor shall be expressed in lb/MMBTU heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(b). At least two data points must be used to calculate each 1-hour average.
- (b) CO and O<sub>2</sub> CEMS Operation Requirements – The following requirements shall apply to Boilers No. 6 and No.7 when burning natural gas and/or fuel oil:
- (1) The Permittee shall install, operate, and maintain the CO and O<sub>2</sub> CEMS according to Performance Specification (PS) 4A of 40 CFR part 60, appendix B [40 CFR 63.7525(a)(1)] and according to the site-specific monitoring plan developed according to 40 CFR 63.7505(d). If an Alternative Monitoring Plan (AMP) is approved per 40 CFR 63.8(f), then the conditions in the AMP shall be met and followed.
  - (2) The CEMS shall be installed and operational upon startup of the boilers.
  - (3) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period, regardless of startup, shutdown and malfunction. [40 CFR 63.7535(a)(3)]
  - (4) The 30-day rolling average shall be calculated on a daily basis as the average of all of the hourly averages in the preceding 30 days [40 CFR 63.7525(a)(5)].
  - (5) Data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the boiler is operating at less than 50 percent of its rated capacity shall not be used to determine compliance. Any period for which the monitoring system is out of control and data are not available for required calculations constitute a deviation from the monitoring requirements. [63.7525(a)(6)]
- (c) 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). This includes preventive maintenance procedures and corrective actions that include those procedures taken to ensure continuous operation and to minimize malfunctions. The SOP must be submitted to IDEM within 90 days of installation of the monitors.
- (d) The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. 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.

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

### D.20.17 Record Keeping Requirements

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The Permittee shall maintain the following records:

- (a) The records of the carbon monoxide emissions, in tons per month, from Boilers No. 6 and No.7 and hours of operation of the emergency compressor;
- (b) The monthly records of the amount of very low sulfur oil burned in each Boilers No. 6 and No.7, and the capacity factor of each of Boilers No. 6 and No 7;

This condition expires when the revisions made to 40 CFR 60 Subpart Db as amended on February 27, 2006, become effective as Indiana law. This condition is not federally enforceable.

- (c) Receipts or test analysis for fuel oil burned in the boiler certifying that the fuel oil is less than 0.3% sulfur content [40 CFR 60.42b(j), 40 CFR 60.49b(r)];
- (d) Daily records of all fuel burned [40 CFR 60.49b(d), 40 CFR 63.7555(d)(1)];
- (e) Annual capacity factor for each fuel calculated monthly using a 12-month rolling average [40 CFR 60.49b(d)];
- (f) Records of any visual opacity reading. These records must include the date and time of the observations, the results of all readings, and the averages calculated;

This condition expires when the revisions made to 40 CFR 60 Subpart Db as amended on February 27, 2006, become effective as Indiana law. This condition is not federally enforceable.

- (g) NOx Emissions data for each of Boilers No. 6 and No. 7 operating day:
  - (1) Average hourly NOx emissions in lbs/MMBtu [40 CFR 60.49b(g)(2)];
  - (2) Rolling 30-day average NOx emissions in lbs/MMBtu [40 CFR 60.49b(g)(3)];
  - (3) Periods when the 30-day NOx average exceeds the limit in D.20.3 [40 CFR 60.49b (g) (4) and 40 CFR 60.49b (h) (4)];
  - (4) Days when sufficient data was not obtained [40 CFR 60.49b(g)(5)];
  - (5) Times and reasons for excluding data [40 CFR 60.49b(g)(6)];
  - (6) Any F factors used to calculate NOx emissions, method of determination, and type of fuel combusted [40 CFR 60.49b(g)(7)];
  - (7) Times when full span was exceeded [40 CFR 60.49b(g)(8)];
  - (8) Description of any modifications to the CEMS that could affect the ability of the system to comply with Performance Standard 2 [40 CFR 60.49b(g)(9)]; and
  - (9) Results of CEMS daily drift tests and quarterly accuracy assessments [40 CFR

60.49b(g)(10)].

- (h) CO Emissions data:
- (1) Each period during which a CMS or CEMS on Boilers No. 6 and No.7 is malfunctioning or inoperative (including out-of-control periods) [40 CFR 63.10(b)];
  - (2) All required measurements needed to demonstrate compliance with the CO standard for Boilers No. 6 and No.7 (including, but not limited to, 15-minute averages of CEMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report) [40 CFR 63.10(b)];
  - (3) All results of CEMS performance evaluations [40 CFR 63.10(b)];
  - (4) All measurements as may be necessary to determine the conditions of performance evaluations [40 CFR 63.10(b)];
  - (5) All CMS calibration checks [40 CFR 63.10(b)];
  - (6) All adjustments and maintenance performed on the CEMS [40 CFR 63.10(b)];
  - (7) Previous (i.e., superseded) versions of the CEMS SOP as required in 40 CFR 63.8(d) (3);
  - (8) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period [40 CFR 63.7555 (a) (5)];
  - (9) Hourly CO average in ppm<sub>dv</sub> [63.7525(a)(5)];
  - (10) 30-day rolling CO average in ppm<sub>dv</sub> calculated as average of all hourly averages in the 30 day period [63.7525(a)(5)]; and
  - (11) The boiler hourly emissions shall be computed using the data points required under 40 CFR 63.8(g) and 40 CFR 63.2, appropriate F factors, and/or the emission factors in the paragraphs (ii) and (iii):
    - (i) 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. At least two equally spaced data points must be used to calculate each 1 - hour average; [40 CFR 63.8(g)]
    - (ii) When burning natural gas: 84 lbs of CO/million cubic feet of gas burned or 12.9 lbs/hr; and
    - (iii) When burning fuel oil: 5 lbs of CO/thousand gallons of oil or 5.58 lbs/hr.
- (k) Pursuant to 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and subpart DDDDD of 40 CFR 63.

- (1) The Permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site;
- (2) The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and
- (3) The Permittee shall report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

#### D.20.18 Reporting Requirements

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- (a) A certification shall be submitted to the IDEM, OAQ, stating that only Very Low Sulfur Oil was burned [40 CFR 60.49b(r)] and a statement that only liquid fossil fuels other than residual oil were burned [40 CFR 63.7506(a)(2)], within thirty (30) days after the end of the six (6) month period being reported. The certification does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) A quarterly summary of the information to document compliance with Conditions D.20.8 (a) and (b) shall be submitted to the IDEM, OAQ, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) A quarterly summary of the information to document compliance with Condition D.20.9 and 40 CFR 63.7550(c)(4) shall be submitted to the IDEM, OAQ, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The following information shall be reported quarterly:
  - (1) For Boilers No. 6 and No.7, all NOx emission records described in D.20.17(g) [40 CFR 60.49b(i)];
  - (2) A statement that only very low sulfur fuel was burned in Boilers No. 6 and No.7 [40 CFR 60.49b(r)];
  - (3) The total fuel used by Boilers No. 6 and No.7 for each calendar month [40 CFR 63.7550(c) (4)];
  - (4) A statement that no new fuels were burned in Boilers No. 6 and No.7 [40 CFR 63.7550(c) (6)];
  - (5) SSM report as described in 40 CFR 63.10(d)(5)(i) [40 CFR 63.7550(c)(9)];
  - (6) Description of any deviations containing the information required by 40 CFR 60.7550 (d) and (e), or a statement that there were none [40 CFR 63.7550(c)(10)];
  - (7) Description of any CEMS downtime events, or a statement that there were none [40 CFR 63.7550(c)(11)];
  - (8) An excess emissions report that identifies any opacity excess emissions, the time

and date of the visible emission readings and the total time of the visible emission observations for each date, and the total number of hours that oil was burned during each quarter. Excess emissions are any 6-minute period when the average visible emissions exceeded 20%. If oil was not used, then the report shall indicate that fuel oil was not combusted. [40 CFR 60.49b(h)] This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable; and

- (9) The excess emission report must provide the calculations showing the annual capacity factor for burning fuel oil at each boiler. [Opacity AMP] This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.

(e) 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 NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR 63.7505(e)].

- (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 IDEM, OAQ 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.

**D.20.19 Applicability of 40 CFR Part 63 Subpart ZZZZ-National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT).**

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The emergency generator or the air compressor has a site-rating of less than 500 brake horsepower. Therefore, the emergency generator and the air compressor are not subject to the requirements of 40 CFR 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines).

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

**PART 70 OPERATING PERMIT  
SEMI-ANNUAL BOILERS NO. 6 and NO. 7 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  
Facility: Boilers No. 6 and No.7

<input type="checkbox"/> Natural Gas <input type="checkbox"/> Very Low Sulfur Oil From:                      To:
--

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

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

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

**Part 70 Quarterly Report**

Source Name: 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 No. 6 and No.7  
Parameter: CO  
Limit: 98 tons/12 months

Quarter: \_\_\_\_\_ YEAR: \_\_\_\_\_

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

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

**Part 70 Quarterly Report  
 for First 12 months of Operation**

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 No. 6 and No.7  
 Parameter: CO  
 Limits: (1) 98 ton/12 months  
 (2) Running Monthly Average: 8.17 tons

Quarter: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2	$\frac{(\text{Column 1} + \text{Column 2})}{(\text{Total Months of Operation})}$
	This Month	Previous 11 Months	*Total Months of Operation	Running average up to current month
Month 1				
Month 2				
Month 3				

\* When determining the total usage for previous 11 months, assume zero usage during the months when the boilers were not in operation.

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

### Part 70 Quarterly 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 No.6  
 Parameter: Very low sulfur oil and hours fuel oil burned  
 Limit: Less than 976,740 gallons/year = < 10% annual capacity for fuel oil

Quarter: \_\_\_\_\_ YEAR: \_\_\_\_\_

Quarter	Column 1 This Quarter		Column 2 Year Total		Column 3 (Column 1 + Column 2) Year Total		Annual Capacity for fuel oil
	No. of gallons	No. of hours	No. of gallons	No. of hours	No. of gallons	No. of hours	
Quarter 1 January-March			0.0	0.0			
Quarter 2 April-June							
Quarter 3 July-September							
Quarter 4 October-December							

The boiler's maximum capacity to burn fuel oil is 9,767,400 gallons.  
 Annual Capacity = No. of gallons of fuel oil burned up to date for the year /9,767,400 gallons

- No deviation occurred in this quarter.  
 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**Part 70 Quarterly 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 No. 7  
 Parameter: Very low sulfur oil and hours fuel oil burned  
 Limit: Less than 976,740 gallons/year = < 10% annual capacity for fuel oil  
 Quarter: \_\_\_\_\_ YEAR: \_\_\_\_\_

Quarter	Column 1 This Quarter		Column 2 Year Total		Column 3 (Column 1 + Column 2) Year Total		Annual Capacity
	No. of gallons	No. of hours	No. of gallons	No. of hours	No. of gallons	No. of hours	
Quarter 1 January-March			0.0	0.0			
Quarter 2 April-June							
Quarter 3 July-September							
Quarter 4 October-December							

The boiler's maximum capacity to burn fuel oil is 9,767,400 gallons.  
 Annual Capacity = No. of gallons of fuel oil burned up to date for the year /9,767,400 gallons

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**Part 70 Annual 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: Emergency Air Compressor (T26-COMP 5600A)  
Parameter: Hour of operation  
Limit: 500 Hours/year

YEAR: \_\_\_\_\_

Hours of Operation

- No deviation occurred in quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

# Indiana Department of Environmental Management Office of Air Quality

Addendum to the  
Technical Support Document for Significant Source Modification to a Part 70 Permit.

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.: SSM 157-21809-00006  
Permit Reviewer: Dr. Trip Sinha

On February 28, 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 the construction of two natural gas and fuel oil fired boilers, one natural gas fired emergency generator, and one diesel fired compressor. The notice also stated that OAQ proposed to issue a permit for this construction 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 30, 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: Delete Condition B.5:

Reason: It is redundant with Condition D.20.1.

Response 1: IDEM agrees that Condition B.5 is redundant with Condition D.20.1. Condition B.5 has been deleted. Condition B.6 has been renumbered as Condition B.5.

~~B.5 NSPS Reporting Requirement [326 IAC 12][40 CFR 60, Subpart Db]  
[40 CFR 63, Subpart DDDDD]~~

~~Pursuant to the New Source Performance Standards (NSPS), Part 60, Subpart Db, and the National Emission Standards for Hazardous Air Pollutants (NESHAP), Part 63, Subpart DDDDD, the Permittee is hereby advised of the requirement to report the following at the appropriate times:~~

- ~~(a) Commencement of construction date (no later than 30 days after such date);~~
- ~~(b) Actual start up date (within 15 days after such date); and~~
- ~~(c) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.~~

~~Reports are to be sent to:~~

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

~~The application and enforcement of these standards have been delegated to the IDEM, OAQ. The requirements of 40 CFR Part 60 and 40 CFR 63 are also federally enforceable.~~

Comment 2: Change Condition D.20.1 to read:

~~D.20.1 General Provisions Relating to NSPS and NESHAP [326 IAC 12-1]  
[40 CFR 60, Subpart A] [40 CFR 63, Subpart A] [326 IAC 20]~~

---

- (a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Boilers No. 6 and No.7 described in this section except when otherwise specified in 40 CFR Part 60, Subpart Db.
- (b) **Pursuant to 40 CFR 63.7505, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for Boilers No. 6 and No.7, as specified in Appendix A of 40 CFR Part 63, Subpart DDDDD in accordance with the schedule in 40 CFR 63, Subpart DDDDD.**

Reason: To combine the NSPS and NESHAP General Provision references into one location. Proposed Condition D.20.5, which contained the NESHAP General Provision references, should be deleted.

Response 2: IDEM agrees and has revised Condition D.20.1 as follows, and deleted Condition D.20.5.

~~D.20.1 General Provisions Relating to NSPS and NESHAP [326 IAC 12-1]  
[40 CFR 60, Subpart A] [40 CFR 63, Subpart A] [326 IAC 20-1]~~

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- (a) The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to Boilers No. 6 and No.7 described in this section except when otherwise specified in 40 CFR Part 60, Subpart Db.
- (b) **Pursuant to 40 CFR 63.7505, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for Boilers No. 6 and No.7, as specified in Appendix A of 40 CFR Part 63, Subpart DDDDD in accordance with the schedule in 40 CFR 63, Subpart DDDDD.**

~~D.20.5 General Provisions Relating to NESHAP DDDDD [326 IAC 20-1] [40 CFR Part 63, Subpart A]~~

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~~Pursuant to 40 CFR 63.7505, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for Boilers No. 6 and No.7, as specified in Appendix~~

~~A of 40 CFR Part 63, Subpart DDDDD in accordance with the schedule in 40 CFR 63, Subpart DDDDD.~~

Comment 3: Insert a new Condition D.20.2 as shown:

**D.20.2 Fuel usage restrictions [326 IAC 2]**

- (a) **The Permittee shall burn only natural gas or very low sulfur fuel oil. Very low sulfur fuel oil, as defined in 40 CFR 60.41b, means oil that contains no more than 0.3 weight percent sulfur, or that when combusted without sulfur dioxide emission control, has a sulfur dioxide emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input.**
- (b) **The Permittee shall burn no more than 976,740 gallons of very low sulfur fuel oil per 12 month period in each of Boilers No. 6 and No. 7. This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Subsequent permit conditions will need to be renumbered.

Reason: To combine all of the fuel requirements into one condition (and eliminate potential redundancy), and to clarify that requirement (b), which is from the Alternative Monitoring Plan, will no longer be needed when the recent amendments to 40 CFR 60 Subpart Db are incorporated into Indiana Law.

Response 3: The new condition does not originate from the authority in 326 IAC 2.

The first sentence of paragraph (a) of the new condition is not an applicable requirement. The first sentence of paragraph (a) is a compliance determination requirement, which is already required in Condition D.20.15 (renumbered as D.20.13) (Compliance Requirements for SO<sub>2</sub>). The second sentence of paragraph (a) of the new condition states the definition of very low sulfur oil [40 CFR 60.41b]. Therefore, the proposed Condition D.20.2(a) is redundant with Condition D.20.15 (renumbered as D.20.13).

Paragraph (b) of the new condition is the redundant with Condition D.20.11 (renumbered as D.20.9). Condition D.20.11 (renumbered as D.20.9) will expire when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law.

No changes have been made to the permit.

Comment 4: Renumber Condition D.20.2 as Condition D.20.3, and change as shown:

**D.20.23 Opacity Limitations [326 IAC 5] [40 CFR 60.43b] [326 IAC 12] [326 IAC 2-7-24]**

- (a) Notwithstanding Condition C.2, pursuant to **326 IAC 12** ~~40 CFR 60.43b(f)~~ the opacity from Boilers No. 6 and No.7 shall not exceed 20% for any 6-minute block period, except for one 6-minute period per hour of not more than 27 percent opacity. Pursuant to **326 IAC 12** ~~40 CFR 60.43b(f)~~, the opacity limit does not apply during periods of startups, shutdowns, or malfunctions. However, the general opacity requirements of Condition C.2 apply at all times. **This condition expires when the revisions**

**made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

- (b) When starting up or shutting down Boilers No. 6 and No.7, opacity may exceed the applicable limit in Condition C.2. 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.
- (c) **Pursuant to 40 CFR 60.43b(h)(5), because Boilers No. 6 and No. 7 will burn only very low sulfur fuel oil or natural gas, the boilers are not subject to opacity limitations in 40 CFR 60.43b(f) and (g).**

Reason: 40 CFR 60, Subpart Db final rule contains a provision stating that opacity limits do not apply if the source burns fuel oil with a sulfur content of less than 0.3% by weight. Eli Lilly will take this limit (addressed elsewhere in the construction permit) on the sulfur in the fuel oil it burns in the new boilers. Because the final rule was published on February 27, 2006, it has not been incorporated into Indiana regulations at this time. As a result this condition should only apply until the amendments are adopted by Indiana. Also, a number of citations were corrected.

Response 4: IDEM agrees and Condition D.20.2 has been revised accordingly.

Comment 5: Renumber Condition D.20.3 and change as shown:

D.20.3 ~~4~~Sulfur Dioxide (SO<sub>2</sub>) Limitations [326 IAC 7-1.1-2] [40 CFR 60.41b]  
[40 CFR 60.42b(kj)] [326 IAC 12] **[326 IAC 2-7-24]**

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Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emission Limitations), **326 IAC 12**, and 40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units):

- (a) The SO<sub>2</sub> emission rate from Boilers No. 6 and No.7 shall not exceed ~~0.5~~ **0.32** pounds per million Btu heat input. **If the Permittee burns either natural gas or very low sulfur fuel oil, as required by Condition D.20.2, the Permittee shall be in compliance with this requirement.**
- (b) ~~The sulfur content of the fuel oil shall not exceed five tenths (0.5%) by weight.~~ Pursuant to 40 CFR 60 Subpart Db, the fuel oil sulfur content or sulfur dioxide emission limit applies at all times, including periods of startup, shutdown, and malfunction.

Reasons: To include the correct reference to the applicable section in the final version of Part 60, Subpart Db, to correct a typo in (a), to add the 0.3% sulfur content limit per the Final Rule, and to clarify that use of the 0.3% sulfur fuel oil demonstrates compliance with the emission limit.

Response 5:

- (a) IDEM agrees that the applicable section in the final version of Part 60, Subpart Db, as amended on February 27, 2006, should be cited in Condition D.20.3.
- (b) The typo has been corrected.
- (c) The final version of 40 CFR 60, Subpart Db defines very low sulfur oil as an oil that contains no more than 0.3 weight percent sulfur or that, when combusted without sulfur dioxide emission control, has a sulfur dioxide (SO<sub>2</sub>) emission rate equal to or less than 0.32 lb/MMBtu heat input. IDEM agrees that the SO<sub>2</sub> emission rate of 0.5 pounds per million Btu heat input and the requirement that the fuel oil contain no more than 0.5 weight percent sulfur in Condition D.20.3, should be changed to an SO<sub>2</sub> emission rate of 0.32 pounds per million Btu heat input, and a requirement that the fuel oil contain no more than 0.3 weight percent sulfur, respectively.
- (d) IDEM agrees that it is necessary to clarify that use of the 0.3% sulfur fuel oil demonstrates compliance with the SO<sub>2</sub> emission limit.

Condition D.20.3 has been revised as follows:

D.20.3 Sulfur Dioxide (SO<sub>2</sub>) Limitations [326 IAC 7-1.1-2] [40 CFR 60.41b]  
[40 CFR 60.42b(kj)] [326 IAC 12] **[326 IAC 2-7-24]**

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- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emission Limitations), **326 IAC 12**, and 40 CFR 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units):
  - (a) **(1)** The SO<sub>2</sub> emission rate from Boilers No. 6 and No.7 shall not exceed ~~five tenths (0.5)~~ **0.32** pounds per million Btu heat input; or
  - (b) **(2)** The ~~sulfur content of the fuel oil shall not exceed five tenths (0.5%) by weight.~~ **contain no more than 0.3 weight percent sulfur.**
  - (3) If the Permittee burns either natural gas or very low sulfur fuel oil, the Permittee shall be in compliance with Conditions D.20.3(a)(1) and (2).**
- (b) Pursuant to 40 CFR 60 Subpart Db, the fuel oil sulfur content or sulfur dioxide emission limit applies at all times, including periods of startup, shutdown, and malfunction.

Comment 6: Change Condition D.20.6 as shown, and delete Condition D.20.7:

D.20.6 Particulate Matter (PM) Limitations [40 CFR 63.7505]  
[40 CFR Subpart DDDDD, Table 1][**326 IAC 20-1**][**326 IAC 12**][**40 CFR**  
**60.43b(h)**][**326 IAC 6-2-4**][**326 IAC 2-7-24**]

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Pursuant to 40 CFR 63 Subpart DDDDD, Table 1, the PM emission rate from each of Boilers No. 6 and No.7 shall not exceed 0.03 pounds per MMBtu heat input. The particulate matter emission limit applies at all times except during periods of startup, shutdown, or malfunction. **This shall be demonstrated by burning distillate fuel oil that meets the requirements of Condition D.20.2(a).**

Reason: To add applicable references to the permit condition; and to clarify how compliance with the limit will be demonstrated. This compliance demonstration is based on the preamble to the final version of 40 CFR 60.43b (71 FR 9866-01) which states that burning fuel oil which contains 0.3% weight sulfur demonstrates compliance with the 0.3 lb/MMBTU limit in the NSPS standard. The PM limit in 40 CFR 60.43b is the same as in 40 CFR 63, Subpart DDDDD, so this compliance method can be used to demonstrate compliance with both limits. The relevant parts of the Federal Register citation are shown below:

*“B. What are the requirements for industrial-commercial-institutional steam generating units (40 CFR 60, Subpart Db)?*

The PM emission limit for new and reconstructed industrial-commercial-institutional steam generating units is 13 ng/J (0.03 lb/MMBtu) for units that burn coal, oil, gas, wood, or a mixture of these fuels with other fuels.

Units burning only oil, that contains no more than 0.3 weight percent sulfur, or liquid or gaseous fuels with a potential sulfur dioxide emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input, may demonstrate compliance with the PM standard by maintaining certification of the fuels burned. ”

Response 6: Pursuant to 40 CFR 60.43b(h)(5), because Boilers No. 6 and No. 7 will burn only oil that contains no more than 0.3 weight percent sulfur or natural gas with potential sulfur dioxide emission rates of 140 ng/J (0.32 lb/MMBtu) heat input or less, these boilers are not subject to the PM limitations in 40 CFR 60.43b(h)(1). Also, the PM emissions from these boilers are not regulated by 326 IAC 12.

The PM limit in Condition D.20.6 will also satisfy the PM limit in Condition D.20.7. Since Eli Lilly has requested streamlining the requirements, Condition D.20.7 is deleted and the streamlining citation is added. Subsequent permit conditions have been renumbered.

Condition D.20.6 (renumbered as Condition D.20.5) has been revised as shown below.

D.20.5 Particulate Matter (PM) Limitations [40 CFR 63.7505]  
[40 CFR Subpart DDDDD, Table 1] [326 IAC 20-1] [326 IAC 6-2-4]  
[326 IAC 2-7-24]

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Pursuant to 40 CFR 63 Subpart DDDDD, Table 1, the PM emission rate from each of Boilers No. 6 and No.7 shall not exceed 0.03 pounds per MMBtu heat input. The particulate matter emission limit applies at all times except during periods of startup, shutdown, or malfunction.

~~D.20.7 Particulate Matter (PM) Limitations [326 IAC 6-2-4]~~

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~~Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emission rate from each of Boilers No. 6 and No.7 shall not exceed 0.19 pounds per MMBtu heat input.~~

Comment 7: Renumber Condition D.20.8 and change as shown:

D.20.8 **7** Hydrogen Chloride (HCl) Limitations [40 CFR 63.7505]  
[40 CFR 63 Subpart DDDDD, Table 1] [326 IAC 20-1]

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Reason: To reference the citation for the Indiana version of the MACT rules.

Response 7: IDEM agrees that the citation for the Indiana version of the MACT rules should be referenced to Condition D.20.8 (renumbered as Condition D.20.6). Condition D.20.8 (renumbered as Condition D.20.6) has been revised accordingly.

D.20.8 **6** Hydrogen Chloride (HCl) Limitations [40 CFR 63.7505]  
[40 CFR 63 Subpart DDDDD, Table 1] [326 IAC 20-1]

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Comment 8: Renumber Condition D.20.9 and change as shown:

D.20.9 **8** Carbon Monoxide (CO) Limitations [40 CFR 63 Subpart DDDDD, Table 1]  
[40 CFR 63.7505] [40 CFR 63.7525] [40 CFR 63.7540] [326 IAC 20-1]

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Reason: To reference the citation for the Indiana version of the MACT rules.

Response 8: Condition D.20.9 (renumbered as Condition D.20.7) has been revised accordingly.

D.20.9 **7** Carbon Monoxide (CO) Limitations [40 CFR 63 Subpart DDDDD, Table 1]  
[40 CFR 63.7505] [40 CFR 63.7525] [40 CFR 63.7540] [326 IAC 20-1]

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Comment 9: Renumber Condition D.20.10 to Condition D.20.9.

Response 9: Condition D.20.10 has been renumbered to Condition D.20.8.

Comment 10: Renumber Condition D.20.11 to Condition D.20.10 and add the following statement:

**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Reason: The AMP is a voluntary alternative method that Lilly obtained approval for to address the opacity provisions of 40 CFR Part 60, Subpart Db as it existed before it was amended on February 27, 2006. Recent revisions to Subpart Db provide that opacity limits do not apply if the source burns fuel oil with a sulfur content of less than 0.3% by weight. Eli Lilly will take this limit (addressed elsewhere in the construction permit) on the sulfur in the fuel oil it burns in the new boilers. However, the final rule revision was published on February 27, 2006, but has not been incorporated into Indiana regulations at this time. So this condition should only apply until the regulations are adopted.

Response 10: IDEM agrees. Condition D.20.11 (renumbered as Condition D.20.9) has been revised as shown below:

D.20.44 9 NSPS Capacity Limitations [AMP approval 11-22-2005] [326 IAC 12]  
[40 CFR 60, Subpart Db]

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.....  
**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Comment 11: Renumber Condition D.20.12 to Condition D.20.11 and add the following statement and make the following changes as shown:

D.20.42 11 Required Plans and Procedures [~~326 IAC 2-7-5(13)~~] [40 CFR Part 63, Subpart  
DDDDD] [**326 IAC 20**]

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**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Reason: To add the appropriate citation reference and to set an expiration date for the condition as described above.

Response 11: Condition D.20.12 has been renumbered to Condition D.20.10.

Citation 326 IAC 20-1 has been added. 326 IAC 2-7-5(13) is not applicable to this condition, therefore it has been deleted. This condition does not expire when 40 CFR 60, Subpart Db becomes official as Indiana Law, therefore the statement to establish an expiration date is not included in this condition. Condition D.20.12 (renumbered as Condition D.20.10) has been revised as shown below:

D.20.12 **10** Required Plans and Procedures [~~326 IAC 2-7-5(13)~~]  
[40 CFR Part 63, Subpart DDDDD] [**326 IAC 20-1**]

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Comment 12: Renumber Condition D.20.14 to Condition D.20.13, and add the following statement:

**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Reason: To establish an expiration date for the condition as described above.

Response 12: Recent revisions to Subpart Db provide that opacity limits do not apply if the source burns fuel oil with a sulfur content of less than 0.3% by weight. Since these boilers will be burning fuel oil with a sulfur content of less than 0.3% by weight, these boilers are not subject to 40 CFR 60.43b(f). This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. Condition D.20.14 (renumbered as Condition D.20.12) has been revised as shown below:

D.20.14-**12** Opacity Monitoring Requirements [U. S. EPA Alternative Monitoring Plan approval 11/22/2005] [~~40 CFR 43b(f)~~] [326 IAC 12]

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**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Comment 13: Renumber Condition D.20.15 to Condition D.20.14 and change as shown:

D.20.15 **14** Compliance Requirements for SO<sub>2</sub> [326 IAC 7-2] [40 CFR 60.45b (j)]  
[40 CFR 60.47b(f)] [~~326 IAC 12~~] [~~40 CFR 63.7506(a)~~]

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The Permittee shall obtain fuel receipts from the fuel supplier, **or perform fuel testing**, which certify that the fuel oils meet the definitions of very low sulfur oil as defined in 40 CFR 60.41b. Compliance testing and compliance monitoring are not required when burning very low sulfur oil.

Reason: Delete the reference to 40 CFR 63.7506, because it is not applicable.

Response 13: Eli Lilly has requested to include the testing option as a means to demonstrate compliance with the definition of very low sulfur oil. The condition has been amended to include the testing option. Condition D.20.15 (renumbered as Condition D.20.13) has been revised as shown below:

**D.20.13** Compliance Requirements for SO<sub>2</sub> [326 IAC 7-2] [40 CFR 60.45b(j)]  
[40 CFR 60.47b(f)][326 IAC 12][~~40 CFR 63.7506(a)~~]

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The Permittee shall obtain fuel receipts from the fuel supplier, which certify that the fuel oils meet the definitions of very low sulfur oil as defined in 40 CFR 60.41b.

- (a) The Permittee shall burn only natural gas or very low sulfur fuel oil.
- (b) The Permittee shall demonstrate that the oil meets the definition of very low sulfur oil by:
  - (1) Following the performance testing procedures as described in 40 CFR 60.45b(c) or 40 CFR 60.45b(d); or
  - (2) Maintaining fuel receipts as described in 40 CFR 60.49b(r).

~~Compliance testing and e~~Compliance monitoring ~~are~~ is not required when burning very low sulfur oil.

Comment 14: Delete Condition D.20.16

~~D.20.16~~ Reserved

Reason: It is no longer needed to reserve this section.

Response 14: Draft Condition D.20.16 has been deleted.

Comment 15: Add to Condition D.20.17:

**D.20.17** Initial Performance Test Requirements for NO<sub>x</sub> [40 CFR 60.46b] [326 IAC 12]  
[326 IAC 3-6-3] [326 IAC 2-7-24] [326 IAC 2-1.1-11] [**40 CFR Part 60.8**]

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Reason: To add citation reference.

Response 15: Condition D.20.17 (renumbered as Condition D.20.14) has been changed accordingly.

**D.20.14** Initial Performance Test Requirements for NO<sub>x</sub> [40 CFR 60.46b] [326 IAC 12] [326 IAC 3-6-3] [326 IAC 2-7-24] [326 IAC 2-1.1-11] [**40 CFR Part 60.8**]

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Comment 16: Change Condition D.20.18 as shown:

D.20.18 Initial and Continuous Compliance Requirements for PM, HCl and CO [40 CFR 63.7506] [40 CFR 63.7510] [40 CFR 63.7530] [40 CFR 63.7540] **[326 IAC 20]**

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.....

**(e) To demonstrate continuous compliance with the work practice standard for CO, the Permittee shall meet the requirements of 40 CFR 63.7540(a)(10).**

Delete existing Condition (e).

~~(e) Consistent with 40 CFR 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if the Permittee demonstrates to the IDEM, OAQ's satisfaction that the Permittee was operating in accordance with the SSMP. IDEM, OAQ will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in 40 CFR 63.6(e).~~

Reason: To add the citation reference, and to add a condition for continuous compliance demonstration. Delete the last condition because the sections referenced do not refer to deviations. It is Lilly's understanding of 40 CFR 63.6(e) and the MACT startup, shutdown, and malfunction provisions that the emission limits in the MACT standard do not apply during periods of SSM, unless the specific standard states that the standards do apply during these periods.

Response 16: Pursuant to 40 CFR 63.7505(a), the Permittee shall be in compliance with the emission limits and the work practice standards at all times, except during periods of startup, shutdown, and malfunction. However, pursuant to 40 CFR 63.7540, each instance during a startup, shutdown, or malfunction, the boilers did not meet the work practice standards, is a deviation from the work practice standard. These deviations must be reported according to the requirements in 40 CFR 63.7550 and the reporting requirement is included in the reporting Condition D.20.21(d)(6) (renumbered as Condition D.20.18(d)(5)). Therefore draft Condition D.20.18(e) is redundant with Condition D.20.21(d)(6) (renumbered as Condition D.20.18(d)(5)). Draft Condition D.20.18(e) has been deleted. New Condition (e) has been included in the permit in place of the draft Condition D.20.18(e). Condition D.20.18 (renumbered as Condition D.20.15) has been changed as shown below:

D.20.18 **15** Initial and Continuous Compliance Requirements for PM, HCl and CO [40 CFR 63.7506] [40 CFR 63.7510] [40 CFR 63.7530] [40 CFR 63.7540] **[326 IAC 20-1]**

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.....

(e) ~~Consistent with 40 CFR 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if the Permittee demonstrates to the IDEM, OAQ's satisfaction that the Permittee was operating in accordance with the SSMP. IDEM, OAQ will determine whether deviations that~~

~~occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in 40 CFR 63.6(e).~~

**To demonstrate continuous compliance with the work practice standard for CO, the Permittee shall meet the requirements of 40 CFR 63.7540(a)(10).**

Comment 17: Change Condition D.20.19 as shown:

D.20.19 Continuous Emission Monitoring System (CEMS) Requirements [40 CFR 60.13] [40 CFR 60.48b] [40 CFR 63.7525] [40 CFR 63.8] [326 IAC 2-1.1-11] [326 IAC 2-7-24] [326 IAC 3-5] ~~[40 CFR 60.49b (e) (2)]~~ [326 IAC 12] **[326 IAC 20-1]**

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.....  
(b) CO and O<sub>2</sub> CEMS Operation Requirements – The following requirements shall apply to Boilers No. 6 and No.7 when burning natural gas and/or fuel oil:

- (1) The Permittee shall install, operate, and maintain the CO and O<sub>2</sub> CEMS according to Performance Specification (PS) 4A of 40 CFR part 60, appendix B **[40 CFR 63.7525(a)(1)]** and according to the site-specific monitoring plan developed according to 40 CFR 63.7505(d). If an Alternative Monitoring Plan (AMP) is approved per 40 CFR 63.8(f), then the conditions in the AMP shall be met and followed.
- (2) The CEMS shall be installed and operational upon startup of the boilers.
- (3) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period, regardless of startup, shutdown and malfunction. **[40 CFR 63.7535(a)(3)]**

.....  
(c) 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)~~ **This includes preventive maintenance procedures and corrective actions that include those procedures taken to ensure continuous operation and to minimize malfunctions. The SOP must be submitted to IDEM within 90 days of installation of the monitors.**

(d) **The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. 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.**

Reason: To add citation references to clarify the requirements, to add a statement to clarify that the SOP be submitted to IDEM, and to add a statement to clarify that the commissioner may require stack tests.

Response 17: Citation 40 CFR 49b(e)(2) has been revised to reflect 40 CFR 60.48b(e)(2). Condition D.20.19 (renumbered as Condition D.20.16) has been revised as shown below.

D.20.19 ~~16~~ Continuous Emission Monitoring System (CEMS) Requirements  
[40 CFR 60.13] [40 CFR 60.48b] [40 CFR 63.7525] [40 CFR 63.8]  
[326 IAC 2-1.1-11] [326 IAC 2-7-24] [326 IAC 3-5] [40 CFR 60.498b (e) (2)]  
[326 IAC 12] **[326 IAC 20-1]**

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.....  
(b) CO and O<sub>2</sub> CEMS Operation Requirements – The following requirements shall apply to Boilers No. 6 and No.7 when burning natural gas and/or fuel oil:

- (1) The Permittee shall install, operate, and maintain the CO and O<sub>2</sub> CEMS according to Performance Specification (PS) 4A of 40 CFR part 60, appendix B **[40 CFR 63.7525(a)(1)]** and according to the site-specific monitoring plan developed according to 40 CFR 63.7505(d). If an Alternative Monitoring Plan (AMP) is approved per 40 CFR 63.8(f), then the conditions in the AMP shall be met and followed.
- (2) The CEMS shall be installed and operational upon startup of the boilers.
- (3) Continuous operation is defined as the collection of at least one measurement for each successive 15-minute period, regardless of startup, shutdown and malfunction. **[40 CFR 63.7535(a)(3)]**

.....  
(c) 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). **This includes preventive maintenance procedures and corrective actions that include those procedures taken to ensure continuous operation and to minimize malfunctions. The SOP must be submitted to IDEM within 90 days of installation of the monitors.**

(d) **The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. 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.**

Comment 18: Change Condition D.20.20 to read:

- (a) The records of the ~~combined~~ carbon monoxide emissions, **in tons per month**, from Boilers No. 6 and No.7 and hours of operation of the emergency compressor. ~~to document compliance with Condition D.20.14~~

Reason: To clarify the requirements.

- (b) The monthly records of the amount of very low sulfur oil burned in each of Boilers No. 6 and No.7, and the capacity factor of each of Boilers No. 6 and No. 7. ~~to document compliance with Condition D.20.14~~

**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Reason: The condition should expire when Indiana adopts the revisions to Subpart Db into the Indiana NSPS rules.

- (c) Receipts or test analysis for fuel oil burned in the boiler certifying that the fuel oil is less than 0.53% sulfur content [40 CFR 60.42b(j), 40 CFR 60.49b(r )].

Reason: To change the sulfur content of oil to agree with the other sections of the permit.

- .....
- (f) Records of any visual opacity reading. ~~taken to document compliance with Condition D.20.14~~ These records must include the date and time of the observations, the results of all readings, and the averages calculated.

**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Reason: The condition should expire when Indiana adopts the revisions to Subpart Db into the Indiana NSPS rules.

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Add to (h) CO Emissions data:

- (11) **The boiler hourly emissions shall be calculated using at least one data point per hour from CO CEMS data, appropriate F factors, and/or the following emission factors:**

**When burning natural gas: 84 lbs of CO/million cubic feet of gas burned or 13.18 lbs/hr.**

**When burning fuel oil: 5 lbs of CO/thousand gallons of oil or 5.71 lbs/hr.**

Reason: To specify how CO emissions will be calculated for the Boiler PSD limit.

Emission limits are from the construction permit application and reflect AP-42 emission factors.

Response 18: IDEM agrees and has made the following changes to address the CEMS issues and incorporation of 40 CFR 60, Subpart Db into Indiana Law.

IDEM disagrees with CO emissions rates of 13.18 and 5.71 lbs/hr as proposed in Condition D.20.20(h)(11) (renumbered as Condition D.20.17(h)(11)). Based on calculations done in Appendix A, the hourly emissions of CO are established as 12.9 and 5.58 lbs/hr when burning natural gas and fuel oil, respectively.

IDEM disagrees with Eli Lilly's proposal to calculate hourly emissions using one data point per hour from CO CEMS data. Pursuant to 40 CFR 63.8(g) and 40 CFR 63.2, data from CEMS for measurement, unless otherwise specified in the relevant standard, shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of 40 CFR 63.8(g) and 40 CFR 63.2 are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. At least two equally spaced data points must be used to calculate each 1 - hour average. Condition D.20.20 (renumbered as Condition D.20.17) has been changed as shown below:

D.20.2017 Record Keeping Requirements

The Permittee shall maintain the following records:

- (a) The records of the ~~combined~~ carbon monoxide emissions, **in tons per month**, from Boilers No. 6 and No.7 and hours of operation of the emergency compressor; ~~to document compliance with Condition D.20.14~~
- (b) The monthly records of the amount of very low sulfur oil burned in each Boilers No. 6 and No.7, and the capacity factor of each of Boilers No. 6 and No. 7; ~~to document compliance with Condition D.20.14.~~

**This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

- (c) Receipts or test analysis for fuel oil burned in the boiler certifying that the fuel oil is less than ~~0.5~~ **0.3%** sulfur content [40 CFR 60.42b(j), 40 CFR 60.49b(r)];

- .....
- (f) Records of any visual opacity reading. ~~taken to document compliance with Condition D.20.14.~~ These records must include the date and time of the observations, the results of all readings, and the averages calculated;

This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.

.....  
(h) .....

(11) The boiler hourly emissions shall be computed using the data points required under 40 CFR 63.8(g) and 40 CFR 63.2, appropriate F factors, and/or the emission factors in the paragraphs (ii) and (iii):

- (i) 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. At least two equally spaced data points must be used to calculate each 1 - hour average; [40 CFR 63.8(g)]
- (ii) When burning natural gas: 84 lbs of CO/million cubic feet of gas burned or 12.9 lbs/hr; and
- (iii) When burning fuel oil: 5 lbs of CO/thousand gallons of oil or 5.58 lbs/hr.

.....  
(k) Pursuant to 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and subpart DDDDD of 40 CFR 63.

- (1) The Permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site;
- (2) The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and
- (3) The Permittee shall report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

Comment 19: Change Condition D.20.21 to read:

- (a) ~~The natural gas boiler~~ **A certification shall be submitted to the IDEM, OAQ, stating that only Very Low Sulfur Oil was burned [40 CFR 60.49b(r)] and a statement that only liquid fossil fuels other than residual oil were burned [40 CFR 63.7506(a)(2)] using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the six (6) month period being reported. The ~~natural gas-fired boiler~~ certification does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).**

Reason: To add the certification requirement for very low sulfur oil.

Delete (c).

- ~~(c) A quarterly summary of the information to document compliance with Conditions D.20.11 shall be submitted to the IDEM, OAQ, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).~~

Reason: It is redundant with Condition D.20.21(d)(4).

- (d)(8) An excess emissions report that identifies any opacity excess emissions, the time and date of the visible emission readings and the total time of the visible emission observations for each date, and the total number of hours that oil was burned during each quarter. Excess emissions are any 6-minute period when the average visible emissions exceeded 20%. If oil was not used, then the report shall indicate that fuel oil was not combusted. [40 CFR 60.49b(h)] **This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable;** and

Reason: The condition should expire when Indiana adopts the revisions to Subpart Db into the Indiana NSPS rules.

- (d)(9) The excess emission report must provide the calculations showing the annual capacity factor for burning fuel oil at each boiler. [Opacity AMP] **This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

Reason: The condition should expire when Indiana adopts the revisions to Subpart Db into the Indiana NSPS rules.

Response 19: IDEM agrees and has made the changes to Conditions D.20.21(a), d(8) and (d)(9) regarding incorporation of 40 CFR 60, Subpart Db into State Law.

IDEM does not agree to revise Condition D.20.21(c) (renumbered as Condition D.20.18(c)), which requires the reporting of very low sulfur oil usage. The very low sulfur oil usage limit in Condition D.20.21(c) (renumbered as Condition D.20.18(c)) shall also limit the very low sulfur oil annual capacity factors of Boilers No. 6 and No.7 to less than 10 percent, which is the requirement of an alternative monitoring plan (AMP) for opacity in

lieu of installing continuous opacity monitoring systems. This report requires the certification by the “responsible official” as defined by 326 IAC 2-7-1(34), whereas the report required by D.20.21(d)(4) (renumbered as Condition D.20.18(d)(3)) does not require certification.

Condition D.20.21 (renumbered as Condition D.20.18) has been changed as shown below:

D.20.2418 Reporting Requirements

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- (a) ~~The natural gas boiler~~ A certification shall be submitted to the IDEM, OAQ, **stating that only Very Low Sulfur oil was burned [40 CFR 60.49b(r)] and a statement that only liquid fossil fuels other than residual oil were burned [40 CFR 63.7506(a)(2)]** using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the six (6) month period being reported. The ~~natural gas-fired boiler~~ certification does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- .....
- (d) The following information shall be reported quarterly:
- (1) For Boilers No. 6 and No.7, all NOx emission records described in D.20.46 ~~(e)~~ **17(g)** [40 CFR 60.49b(i)];
  - ~~(3 2)~~ A statement that only very low sulfur fuel was burned in Boilers No. 6 and No.7 [40 CFR 60.49b(r)];
  - ~~(4 3)~~ The total fuel used by Boilers No. 6 and No.7 for each calendar month [40 CFR 63.7550(c) (4)];
  - ~~(5 4)~~ A statement that no new fuels were burned in Boilers No. 6 and No.7 [40 CFR 63.7550(c) (6)];
  - ~~(6 5)~~ SSM report as described in 40 CFR 63.10(d)(5)(i) [40 CFR 63.7550(c)(9)];
  - ~~(7 6)~~ Description of any deviations containing the information required by 40 CFR 60.7550 (d) and (e), or a statement that there were none [40 CFR 63.7550(c)(10)];
  - ~~(8 7)~~ Description of any CEMS downtime events, or a statement that there were none [40 CFR 63.7550(c)(11)];
  - ~~(9 8)~~ An excess emissions report that identifies any opacity excess emissions, the time and date of the visible emission readings and the total time of the visible emission observations for each date, and the total number of hours that oil was burned during each quarter. Excess emissions are any 6-minute period when the average visible emissions exceeded 20%. If oil was not used, then the report shall indicate that fuel oil was not combusted. [40 CFR 60.49b(h)] **This condition expires when**

**the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable;** and

- (40 9) The excess emission report must provide the calculations showing the annual capacity factor for burning fuel oil at each boiler. [Opacity AMP] **This condition expires when the revisions made to 40 CFR 60 Subpart Db, as amended on February 27, 2006, become effective as Indiana Law. This condition is not federally enforceable.**

.....  
Comment 20: Delete Condition D.20.22.

Reason: It is redundant with Condition D.20.1.

Response 20: IDEM agrees that draft Condition D.20.22 is redundant with Condition D.20.1. Therefore, draft Condition D.20.22 has been deleted.

D.20.22 Initial Notification Requirements [40 CFR 60.7, 40 CFR 63.8]

~~The Permittee shall notify the IDEM, OAQ in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under 40.CFR 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin [40 CFR 63.8(e)].~~

Upon further review, the OAQ has decided to make the following revisions to the permit.

- (1) The paragraph 40 CR 63.7505(e) of the Boiler MACT, 40 CFR 63, Subpart DDDDD, was amended on April 20, 2006. Therefore, Condition D.20.9 (renumbered as D.20.7) has been revised as shown below:

D.20.9 7(b) ~~During periods of startup, shutdown, and malfunction,~~ **Pursuant to 40 CFR 63.7505(a),** the Permittee must operate Boilers No. 6 and No.7 in accordance with the **develop a written startup, shutdown, and malfunction plan (SSMP) for Boilers No. 6 and No.7 according to the provisions in 40 CFR 63.6(e)(3).**~~as required in 40 CFR 63.7505(e).~~

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

**Technical Support Document (TSD)  
for a Part 70 Significant Source 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 Source Modification No.:	SSM 157-21809-00006
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.: 157-18322-00006, issued on December 30, 2004;
- (b) Significant Permit Modification No.: 157-20216-00006, issued on January 19, 2005;
- (c) Significant Permit Modification No.: 157-20878-00006, issued on March 15, 2005;
- (d) Administrative Amendment No.: 157-20003-00006, issued on April 1, 2005;
- (e) Administrative Amendment No.: 157-221143-00006, issued on May 11, 2005; and
- (f) Significant Permit Modification No.: 157-20732-00006, issued on August 15, 2005.

**County Attainment Status**

The source is located in Tippecanoe County.

<b>Pollutant</b>	<b>Status</b>
PM <sub>10</sub>	Attainment
PM <sub>2.5</sub>	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	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<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions.
- (c) Tippecanoe County has been classified as attainment or unclassifiable for CO, lead, NO<sub>2</sub>, PM<sub>10</sub>, and SO<sub>2</sub>. 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 <sub>10</sub>	>100
SO <sub>2</sub>	>100
VOC	>100
CO	>100
NO <sub>x</sub>	>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).

<b>Actual Emissions</b>
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The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

<b>Pollutant</b>	<b>Actual Emissions (tons/year)</b>
PM <sub>10</sub>	394
SO <sub>2</sub>	1,123
VOC	111
CO	155
NO <sub>x</sub>	349
<b>HAP</b>	
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
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

Pollutant	Actual Emissions (tons/year)
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 modification application, submitted by Eli Lilly and Company on September 19, 2005, relating to the construction of two new natural gas and very low sulfur oil (as defined in 40 CFR 60.41b) fired boilers, one natural gas emergency generator and one diesel emergency compressor. The following is the list of the emissions units:

Emissions Unit ID	Emissions Unit Description	Stack/Vent	Nominal Capacity	UOM	Control Device
<i>Building T26:</i>					
BLR006	Natural Gas/Fuel Oil Boiler No. 6	S-T26-BLR006	156.1	MMBtu/hr	None
BLR007	Natural Gas/Fuel Oil Boiler No. 7	S-T26-BLR007	156.1	MMBtu/hr	None
T26-GEN-7500A	Natural Gas Powered Emergency Generator	S-T26- GEN-7500A	125	KW	None
T26-COMP 5600A	Diesel Powered Emergency Air Compressor	S-T26- COMP 5600A	125	Hp	None

**Stack Summary**

**New Equipment**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S-T26-BLR006	Natural Gas/Fuel Oil Boiler No. 6	90	4	47,900	300
S-T26-BLR007	Natural Gas/Fuel Oil Boiler No. 7	90	4	47,900	300
S-T26- GEN-7500A	Natural Gas Powered Emergency Generator	7.75	0.25	1,102	TBD
S-T26- COMP 5600A	Diesel Powered Emergency Air Compressor	TBD	0.1	TBD	TBD

### Enforcement Issue

There are no enforcement actions pending.

### Emission Calculations

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

### Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	20.7
PM <sub>10</sub>	33.4
SO <sub>2</sub>	684
VOC	8.7
CO	116
NOx	264

HAPs	Potential To Emit (tons/year)
TOTAL HAPs	2.67

This source modification is subject to 326 IAC 2-7-10.5(f)(4) and (g), because the potential to emit of PM<sub>10</sub>, SO<sub>2</sub>, CO and NOx is greater than twenty-five (25) tons per year each. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12 (d), because the application requesting a Part 70 permit modification does not qualify as minor permit modification or as an administrative amendment.

### Permit Level Determination – PSD

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

Process/ Emissions Unit	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	Hg	Pb
Boiler No. 6	2.07	5.97	34.5	3.25	49	113.8	Neg.	Neg.
Boiler No. 7	2.07	5.97	34.5	3.25	49	113.8	Neg.	Neg.
Gas Powered Emergency Generator	0.0018	0.0018	0.0001	0.02	0.1	0.63	0.0	0.0
Diesel Powered Emergency Air Compressor	0.07	0.07	0.01	0.08	0.21	0.47	0.0	0.0
Total	4.21	12.0	69.0	6.6	98.3	228.7	0.0	0.0
PAL Limit	NA	NA	2059	NA	NA	648	NA	NA
PAL Limit Increase	NA	NA	0.00	NA	NA	0.00	NA	NA
Total for Modification	4.21	12.0	0.00	6.6	98.2	0.00	Neg	Neg
Significant Level	25	15	40	40	100	40	0.1	0.6

This existing source is a major stationary source, under PSD (326 IAC 2-2).

This source has elected to limit the potential to emit of CO as follows:

- (a) The CO emission rates from Boilers No. 6 and No.7 shall be less than 98 tons per twelve month period with compliance determined at the end of each month. The Permittee will demonstrate compliance with CO emission limit with CEMS data.
- (b) The hours of operation of the emergency compressor shall not exceed 500 hours per year. The Permittee will demonstrate compliance with the hours of operation limit with a non-resettable meter.

Compliance with the above CO emission limit of Boilers No. 6 and No.7, and the hours of operation of the emergency compressor will ensure that the potential to emit of CO from this modification is less than one hundred (100) tons per twelve consecutive month period and therefore will render the requirements of 326 IAC 2-2 not applicable for CO emissions.

The proposed plantwide applicability limitations (PAL) permit no. SPM 157-21811-00006 will set source-wide emissions limits of 648 tons per year for NO<sub>x</sub>, and 2,059 tons per year for SO<sub>2</sub>. 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 for NO<sub>x</sub> and SO<sub>2</sub> as long as Lilly maintains compliance with the PAL provisions. Therefore, pursuant to 326 IAC 2-2.4, the PSD requirements do not apply to the NO<sub>x</sub> and SO<sub>2</sub> emissions from this modification.

This modification to an existing major stationary source is not major because the emissions increases of all the regulated pollutants are less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

### Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

- (a) 40 CFR 60, Subpart Db (New Source Performance Standards for Industrial Commercial-Institutional Steam generating Units)

Boilers No. 6 and No.7 are subject to the New Source Performance Standards for Industrial Commercial-Institutional Steam generating Units (40 CFR Part 60, Subpart Db), which is incorporated by reference as 326 IAC 12. The Permittee will comply with the provisions of 40 CFR 60 Subpart Db as detailed in the Federal Rule Applicability section above.

Nonapplicable portions of the NSPS will not be included in the permit.

Boilers No. 6 and No.7 are subject to the following portions of Subpart Db (326 IAC12).

- (1) 40 CFR 60.40b
- (2) 40 CFR 60.41b
- (3) 40 CFR 60.42b
- (4) 40 CFR 60.43b
- (5) 40 CFR 60.44b
- (6) 40 CFR 60.45b
- (7) 40 CFR 60.46b
- (7) 40 CFR 60.47b
- (8) 40 CFR 60.48b
- (9) 40 CFR 60.49b

- (b) 40 CFR 60, Subpart Db (Boilers No. 6 and No.7 Capacity Limitations)

The amount of fuel oil with a maximum sulfur content of 0.5%, combusted in each of Boilers No. 6 and No.7 shall be less than 976,740 gallons per twelve consecutive month period with compliance determined at the end of each month. This will limit the fuel oil annual capacity factor of Boilers No. 6 and No.7 to less than 10 percent. This is the requirement of the alternative monitoring plan (AMP) for opacity.

- (e) 40 CFR 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters)  
Boilers No. 6 and No.7 are subject to 40 CFR 63, Subpart DDDDD, because they are large liquid fuel boilers.

Nonapplicable portions of the NESHAP will not be included in the permit. Boilers No. 6 and No.7 are subject to the following portions of Subpart DDDDD.

- (1) 40 CFR 63.7485
- (2) 40 CFR 63.7490
- (3) 40 CFR 63.7495
- (4) 40 CFR 63.7499
- (5) 40 CFR 63.7500
- (6) 40 CFR 63.7505
- (7) 40 CFR 63.7506
- (8) 40 CFR 63.7510
- (9) 40 CFR 63.7525
- (10) 40 CFR 63.7530
- (11) 40 CFR 63.7535
- (12) 40 CFR 63.7540
- (13) 40 CFR 63.7545
- (14) 40 CFR 63.7550

- (15) 40 CFR 63.7555
- (16) 40 CFR 63.7560
- (17) 40 CFR 63.7565
- (18) 40 CFR 63.7570
- (29) 40 CFR 63.7575

Table 1  
 Table 9  
 Table 10

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to Boilers No. 6 and No.7 except when otherwise specified in 40 CFR 63 Subpart DDDDD, Table 10.

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

- (1) has a potential to emit before or after 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 applicability criteria, under 40 CFR 64.1, to the following new emissions units:

<b>Emissions Unit</b>	<b>Control Device Used</b>	<b>Emission Limitation (Y/N)</b>	<b>Uncontrolled PTE (tons/year)</b>	<b>Controlled PTE (tons/year)</b>	<b>CAM Applicable (Y/N)</b>
Boiler No. 6	None	Y	SO <sub>2</sub> –350.5 NO <sub>x</sub> – 135 CO - 60	NA	N
Boiler No. 7	None	Y	SO <sub>2</sub> –350.5 NO <sub>x</sub> – 135 CO - 60	NA	N
Emergency Generator	None	N	<100 for all pollutants	NA	N
Emergency Compressor	None	Y	<100 for all pollutants	NA	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the proposed new units as part of this modification.

(g) 40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT).

T26-GEN-7500A emergency generator and T26-COMP 5600A emergency air compressor are stationary RICEs with a site-rating of less than 500 brake horse power. Therefore, the requirements of RICE MACT 40 CFR Part 63 Subpart ZZZZ do not apply to the emergency generator and T26-COMP 5600A emergency air compressor.

### State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

#### **326 IAC 2-2 (PSD)**

PSD applicability is discussed under the Permit Level Determination - PSD section.

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

The operation of Boilers No. 6 and No.7 will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply to Boilers No. 6 and No.7. In addition, pursuant to 326 IAC 2-4.1-1(b)(2), because Boilers No. 6 and No.7 are specifically regulated by NESHAP 40 CFR 63, Subpart DDDDD, Boilers No. 6 and No.7 are exempt from the requirements of 326 2-4.1.

The operation of the emergency generator will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply to the emergency generator.

The operation of the emergency air compressor will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply to the emergency compressor.

#### **326 IAC 2-2 (PSD Minor Limit for Carbon Monoxide)**

- (1) The amount of carbon monoxide emissions from Boilers No. 6 and No.7 shall be less than 98 tons per twelve consecutive month period with compliance determined at the end of each month.
- (2) The hours of operation of the emergency compressor shall be limited to less than 500 hours per year.

Compliance with these limits will render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this modification.

#### **326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating)**

The particulate matter emission rate from Boilers No. 6 and No.7 are 0.005 and 0.014 pounds per million Btu when combusting natural gas and fuel oil, respectively, which are less than the allowable emission rate of 0.19 pounds per MMBtu.

Therefore, Boilers No. 6 and No.7 are capable of complying with 326 IAC 6-2-4.

The allowable particulate emissions rate was calculated from the following equation:

$$Pt = (1.09 / Q^{0.26})$$

$$\begin{aligned} \text{Where } Pt &= \text{Max Allowable Particulate Emission Rate in Ib/MMBtu} \\ Q &= \text{Total Source Operating Capacity of 835 MMBtu} \end{aligned}$$

#### **326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)**

The potential to emit (PTE) of Boilers No. 6 and No.7 is more than 25 tons per year, therefore Boilers No. 6 and No.7 are subject to 326 IAC 7-1.1-1. The sulfur dioxide emissions from Boilers No. 6 and No.7 are less than 0.5 pounds per million BTU. Therefore, Boilers No. 6 and No.7 are capable of complying with 326 IAC 7-1.1-2.

The emergency generator or the emergency compressor does not have a sulfur dioxide PTE of 25 tons per year or more. Therefore, the emergency generator and the emergency compressor are exempt from 326 IAC 7-1.1-2.

**326 IAC 1-7 (Stack Height Provisions)**

The potential to emit of SO<sub>2</sub> from each boiler exceeds 25 tons per year. Therefore, Boilers No. 6 and No.7 are subject to the stack height provisions of 326 IAC 1-7.

**Compliance Determination and Monitoring Requirements**

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

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for response steps 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 response steps within a specific time period.

The compliance determination requirements applicable to this modification are as follows:

- (1) Testing – Testing for Boilers No. 6 and No.7 are required under NSPS and NESHAP.

<b>Emissions Unit</b>	<b>Control Device</b>	<b>Timeframe for Performance Testing</b>	<b>Pollutant</b>	<b>Frequency of Testing</b>	<b>Limit or Requirement</b>
Boiler No. 6	None	Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup	NOx	At the request of IDEM, OAQ	NOx = 0.2 lb/MMBtu
Boiler No. 7	None	Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup	NOx	At the request of IDEM, OAQ	NOx = 0.2 lb/MMBtu
Boiler No. 6	None	Within 180 days after initial startup	Performance evaluation	NA	400 ppm by volume on a dry basis corrected to 3 percent oxygen (30-day rolling average)

Emissions Unit	Control Device	Timeframe for Performance Testing	Pollutant	Frequency of Testing	Limit or Requirement
Boiler No. 7	None	Within 180 days after initial startup	Performance evaluation	NA	400 ppm by volume on a dry basis corrected to 3 percent oxygen (30-day rolling average)

- (2) Record and report for sulfur data for fuel oil.

All compliance determination conditions are spelled out in the NSPS 40 CFR 60, Subpart Db.

- (3) Continuous opacity monitors are required for Boilers No. 6 and No.7 under NSPS 40 CFR 60, Subpart Db, but Lilly has obtained U. S. EPA's approval for an Alternate Monitoring Plan (AMP) to use Method 9 visual observation in lieu of continuous opacity monitors (COMS) when burning fuel oil. Boilers No. 6 and No.7 will be limited to a capacity factor for fuel oil of less than 10 percent.
- (4) CO and O<sub>2</sub> CEMS are required for measuring CO on Boilers No. 6 and No.7 under NESHAP 40 CFR 63, Subpart DDDDD.
- (5) NO<sub>x</sub> CEMS is required for measuring NO<sub>x</sub> on Boilers No. 6 and No.7 under NSPS 40 CFR 60, Subpart Db.

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

Emissions Unit	Parameter	Frequency	Standards	Compliance Response Plan
Boiler No. 6	Visible emissions notations	Once during each daylight shift	20% Opacity	Corrective Action
Boiler No. 7	Visible emissions notations	Once during each daylight shift	20% Opacity	Corrective Action
Boiler No. 6	Operate CEMS for NO <sub>x</sub> at all the times of operation except CEMS breakdowns and repairs		0.2 lb/MMBtu	Corrective Action
Boiler No. 7	Operate CEMS for NO <sub>x</sub> at all the times of operation except CEMS breakdowns and repairs		0.2 lb/MMBtu	Corrective Action
Boiler No. 6	Operate CEMS at all the times except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments		400 ppm <sub>v</sub> of CO except during periods of startup, shutdown, malfunction, and when the boiler is operating at less than 50 percent of rated capacity	Corrective Action

<b>Emissions Unit</b>	<b>Parameter</b>	<b>Frequency</b>	<b>Standards</b>	<b>Compliance Response Plan</b>
Boiler No. 7	Operate CEMS at all the times except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments		400 ppm <sub>dv</sub> of CO except during periods of startup, shutdown, malfunction, and when the boiler is operating at less than 50 percent of rated capacity	Corrective Action

**Conclusion and Recommendation**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 157-21809-00006. The staff recommends to the Commissioner that this Part 70 Significant Source Modification be approved.

## Appendix A

### Emissions Summary

#### Uncontrolled PTE

	PM (tons/yr)	PM10 (tons/yr)	SO <sub>2</sub> (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Total HAPs (tons/yr)
Boiler No. 6 or Boiler No. 7 (Natural gas only)	1.27	5.09	0.40	127.36	3.69	56.31	1.29
Boiler No. 6 or Boiler No. 7 (No. 2 fuel oil only)	9.77	16.12	341.9	48.84	0.98	24.42	0.2339
Boiler No. 6 (Worse case fuel)	9.77	16.12	341.9	127.36	3.69	56.31	1.29
Boiler No. 7 (Worse case fuel)	9.77	16.12	341.86	127.36	3.69	56.31	1.29
Generator (Gas)	0.0018	0.0018	0.0001	0.63	0.02	0.10	0.0128
Compressor (Diesel)	1.20	1.20	0.11	8.32	1.35	3.66	0.0089

	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	HAPs
Total Maximum Combustion	20.7	33.4	684	263.7	8.7	116	2.60

#### Limited PTE

	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	HAPs
Boiler No. 6 or Boiler No. 7 (Natural gas only)	1.11	4.43	0.35	110.8	3.21	49.00	1.05
Boiler No. 6 or Boiler No. 7 (10% capacity of No. 2 fuel oil) and (nat. gas limited to 46.5 tons/yr CO)	2.07	5.97	34.53	113.79	3.25	49.00	1.03
Boiler No. 6 (Worse case fuel)	2.07	5.97	34.53	113.79	3.25	49.00	1.05
Boiler No. 7 (Worse case fuel)	2.07	5.97	34.53	113.79	3.25	49.00	1.05
Generator (Gas)	0.002	0.002	0.0001	0.63	0.02	0.10	0.0128
Compressor (Diesel)	0.07	0.07	0.01	0.47	0.08	0.21	0.0005

	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	HAPs
Total Maximum Combustion	4.20	12.0	69.1	228.7	6.6	98.3	2.11

**Appendix A**

**Boiler No.6 and Boiler No.7  
 Natural Gas Emissions**

**EMISSION FACTORS**

**Boiler (>100)**

AP-42, Tables 1.4-1 and 1.4-2	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	HAPs
lb/10 <sup>6</sup> scf	1.9	7.6	0.6	190	5.5	84	1.8
lb/MMBtu	0.00186	0.00745	0.00059	0.18627	0.00539	0.08235	0.00176

**Potential Emissions**

Boiler No.6 or Boiler No.7	156.1	MMBtu/hr	8760	hrs/year			
Fuel Usage - Nat. Gas			1341	MMcu.ft./yr			
	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	HAPs
lbs/hr	0.29	1.16	0.092	29.1	0.84	12.9	0.28
tons/yr	1.27	5.09	0.40	127.4	3.69	56.3	1.21

**Limited emissions**

Based on the CO limit of 49 tons/yr from each boiler

	PM	PM10	SO <sub>2</sub>	NOx	VOC	CO	HAPs
tons/yr	1.1	4.4	0.4	110.8	3.2	49.0	1.1

CO limit 49 tons/yr

**Appendix A**

Boiler No. 6 and Boiler No. 7

AP-42, Tables 1.4-3 and 1.4-4

Natural Gas HAPs Emissions

**Basis:**

Boiler No.6 or Boiler No.7                      156.1 MMBtu/hr

Hours of Operation                                      8760 hrs/year

	Emission Factors		Estimated Emissions	
	lb/10 <sup>6</sup> scf	lb/MMBtu	lbs/hr	tons/yr
Benzene	2.1E-3	2.1E-6	3.2E-4	1.4E-3
Dichlorobenzene	1.2E-3	1.2E-6	1.8E-4	8.0E-4
Formaldehyde	0.08	7.4E-5	0.01	0.05
Hexane	1.80	1.8E-3	0.28	1.21
Toluene	3.4E-3	3.3E-6	5.2E-4	2.3E-3
Arsenic	2.0E-4	2.0E-7	3.1E-5	1.3E-4
Barium	4.4E-3	4.3E-6	6.7E-4	2.9E-3
Beryllium	< 1.2E-5	1.2E-8	1.8E-6	8.0E-6
Cadmium	1.1E-3	1.1E-6	1.7E-4	7.4E-4
Chromium	1.4E-3	1.4E-6	2.1E-4	9.4E-4
Cobalt	8.4E-5	8.2E-8	1.3E-5	5.6E-5
Copper	8.5E-4	8.3E-7	1.3E-4	5.7E-4
Lead	5.0E-4	4.9E-7	7.7E-5	3.4E-4
Manganese	3.8E-4	3.7E-7	5.8E-5	2.5E-4
Mercury	2.6E-4	2.5E-7	4.0E-5	1.7E-4
Molybdenum	1.1E-3	1.1E-6	1.7E-4	7.4E-4
Nickel	< 2.4E-5	2.4E-8	3.7E-6	1.6E-5
Selenium	2.3E-3	2.3E-6	3.5E-4	1.5E-3
Vanadium				
Zinc	0.03	2.8E-5	4.4E-3	0.02
		<b>Total</b>	<b>0.29</b>	<b>1.29</b>

**Appendix A**  
**Boiler No.6 and Boiler No.7**  
**Fuel Oil Emissions**

**Emission Factors**

AP-42, Table 1.3-1 and 1.3-2  
 Boiler (>100)

			PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
Wgt. % S =	0.5	lb/10 <sup>3</sup> gal	2.00	3.30	78.5	10.0	0.20	5.00
		lb/MMBtu	0.014	0.024	0.500	0.071	0.001	0.036

Boiler No.6 or Boiler No.7	156.1	MMBtu/hr	8760 hrs/year					HAPs from Page 5
			Uncontrolled PTE					HAPs
			PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
		lbs/hr	2.23	3.68	78.1	11.2	0.22	5.58
		tons/yr	9.77	16.12	341.9	48.84	0.98	24.42
								0.0534
								0.2339

**Fuel Usage**

MMBtu/hr x 1000 gal/140 MMBtu = 1115 gal/hr  
 8760 hrs/yr = 9,767,400 gallons/yr

Total amount of fuel oil to be = Based on 10% capacity for each boiler  
 limited from each boiler = 976,740 gallons of No. 2 fuel oil

		PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	HAPs
Based on 10% capacity of each boiler (No.2 fuel oil)	lbs/hr	0.22	0.37	7.81	1.12	0.02	2.44	0.0005
	tons/yr	0.98	1.61	34.19	4.88	0.10	0.56	0.0023

Based on 90% capacity of each boiler (Nat. gas)	tons/yr	1.15	4.58	0.36	114.62	3.32	50.68	1.09
Boiler No. 6 or Boiler No. 7 (10% capacity of No. 2 fuel oil) and (90% capacity of nat. gas)	tons/yr	2.12	6.20	34.55	119.51	3.42	53.12	1.09

Potential emissions based on the CO limit of 49 tons/yr from each boiler CO limit 49 tons/yr

		PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	HAPs
Based on 10% capacity of each boiler (No.2 fuel oil)	tons/yr	0.98	1.61	34.19	4.88	0.10	2.44	0.002

Based on a CO limit of 46.5 tons/yr of each boiler (Nat. gas) Boiler No. 6 or Boiler No. 7 (10% capacity of No. 2 fuel oil) and (nat. gas limited to 46.5 tons/yr CO)	tons/yr	<b>1.09</b>	<b>4.36</b>	<b>0.34</b>	<b>108.91</b>	<b>3.15</b>	<b>46.56</b>	<b>1.03</b>
	tons/yr	<b>2.07</b>	<b>5.97</b>	<b>34.53</b>	<b>113.79</b>	<b>3.25</b>	<b>49.00</b>	<b>1.03</b>

**Appendix A**  
**Boiler No.6 and Boiler No.7**

**Basis**

Fuel Oil HAPs Emissions

AP-42 Tables, 1.3-9 and 1.3-10

Boiler No. 6 or Boiler No. 7	156.1	MMBtu/hr
Hours of Operation	8760	hrs/year
Heat Content of No. 2 fuel oil =	0.14	MMBtu/gal

**Emission Factor Potential Emissions**

	lb/10 <sup>3</sup> gals	lbs/hr	tons/yr
Benzene	0.0002	0.0002	0.0010
Formaldehyde	0.0330	0.0368	0.1612
Napthalene	0.0011	0.0013	0.0055
1,1,1-Trichloroethane	0.0002	0.0003	0.0012
Toluene	0.0062	0.0069	0.0303
O-Xylene	0.0001	0.0001	0.0005
<b>Total</b>		<b>0.0456</b>	<b>0.1997</b>
	lb/10 <sup>12</sup> gals		
Arsenic	4	0.0006	0.0027
Beryllium	3	0.0005	0.0021
Cadmium	3	0.0005	0.0021
Chromium	3	0.0005	0.0021
Copper	6	0.0009	0.0041
Lead	6	0.0009	0.0041
Manganese	3	0.0005	0.0021
Mercury			
Nickel	3	0.0005	0.0021
Selenium	15	0.0023	0.0103
Zinc	4	0.0006	0.0027
<b>Total</b>		<b>0.0078</b>	<b>0.0342</b>
<b>Total HAPs</b>		<b>0.0534</b>	<b>0.2339</b>
<b>10% HAPs</b>		<b>0.0053</b>	<b>0.0234</b>

**Appendix A**

Generator and Compressor Emissions

**Generator**                      125 KW=              0.7108333 MMBTU/hr @ 60% efficiency  
 Gas Powered  
 Emission factors source

NOx	9.2 g/KW-hr	CFR 60.4205(a)
SO <sub>2</sub>	0.000588 lb/MMBTU	AP-42 Table 3.2-2
CO	0.557 lb/MMBTU	AP-42 Table 3.2-2
PM/PM10	0.00991 lb/MMBTU	AP-42 Table 3.2-2
VOC	0.118 lb/MMBTU	AP-42 Table 3.2-2

Kwh=                      3412    BTU  
 lb/kw-hr =              0.75 lb/HP  
 1 lb =                      454 grams

	500	hrs/year based on EPA Guidance					
		Uncontrolled Emissions					
		PM	PM-10	SO <sub>2</sub>	NOx	VOC	CO
		0.00991	0.00991	0.000588	9.2	0.118	0.557
		lb/MMBTU	lb/MMBTU	lb/MMBTU	g/KW-hr	lb/MMBTU	lb/MMBTU
	lb/hr	0.01	0.01	0.00	2.53	0.08	0.40
	tons/yr	0.0018	0.0018	0.0001	0.63	0.02	0.10

**Compressor**                      125 HP                      8760    hrs/yr  
 Diesel

NOx	6.9 g/KW-hr	CFR 60.4205(a)
SO <sub>2</sub>	0.000205 lb/HP-hr	AP-42 Table 3.3-1
CO	0.00668 lb/HP-hr	AP-42 Table 3.3-1
PM/PM10	0.0022 lb/HP-hr	AP-42 Table 3.3-1
VOC	0.00247 lb/HP-hr	AP-42 Table 3.3-1

		Uncontrolled Emissions					
		PM	PM-10	SO <sub>2</sub>	NOx	VOC	CO
		lb/HP-hr	lb/HP-hr	lb/HP-hr	g/KW-hr	lb/HP-hr	lb/HP-hr
		0.0022	0.0022	0.000205	6.9	0.00247	0.00668
	lb/hr	0.28	0.28	0.03	1.90	0.31	0.84
	tons/yr	1.20	1.20	0.11	8.32	1.35	3.66

Limited Hours                      =              500    hrs/yr

		Limited Emissions					
		PM	PM-10	SO <sub>2</sub>	NOx	VOC	CO
		lb/HP-hr	lb/HP-hr	lb/HP-hr	g/KW-hr	lb/HP-hr	lb/HP-hr
		0.0022	0.0022	0.000205	6.9	0.00247	0.00668
	lb/hr	0.28	0.28	0.03	1.90	0.31	0.84
	tons/yr	<b>0.07</b>	<b>0.07</b>	<b>0.01</b>	<b>0.47</b>	<b>0.08</b>	<b>0.21</b>

**Generator**      1 KW            =            3,413            Btu/hr  
                          Capacity       =            125            KW            =            0.711042  
                          Hrs                    =            500            PTE based on the U.S. EPA Guidance

AP-42, Table 3.2-2

	Emission Factor		Potential Emissions	
	lb/MMBtu		lbs/hr	tons/yr
1,1,2,2 Tetrachloroethan	0.00004		0.0000	0.0000
1,1,2 Trichloroethane	0.00003		0.0000	0.0000
1,3-Butadiene	0.00027		0.0002	0.0000
1,3 Dichloropropene	0.00003		0.0000	0.0000
2-Methylnaphthalene	0.00003		0.0000	0.0000
2,2,4- Trimethylpentane	0.00025		0.0002	0.0000
Acetaldehyde	0.00000		0.0000	0.0000
Acetnaphthylene	0.00001		0.0000	0.0000
Acetaldehyde	0.00836		0.0059	0.0015
Acrolein	0.00514		0.0037	0.0009
Benzene	0.00044		0.0003	0.0001
Benzo(b)fluranthene	0.00000		0.0000	0.0000
Benzo(e)pyrene	0.00000		0.0000	0.0000
Benzo(g,h,i)perylene	0.00000		0.0000	0.0000
Biphenyl	0.00021		0.0002	0.0000
Carbon Tetrachloride	0.00004		0.0000	0.0000
Chlorobenzene	0.00003		0.0000	0.0000
Chloroform	0.00003		0.0000	0.0000
Ethylbenzene	0.00004		0.0000	0.0000
Ethyl Dibromide	0.00004		0.0000	0.0000
Fluoranthene	0.00000		0.0000	0.0000
Fluorene	0.00001		0.0000	0.0000
Formaldehyde	0.05280		0.0375	0.0094
Methanol	0.00250		0.0018	0.0004
Methylene Chloride	0.00002		0.0000	0.0000
n-Hexane	0.00111		0.0008	0.0002
Naphthalene	0.00007		0.0001	0.0000
PAH	0.00003		0.0000	0.0000
Phenanthrene	0.00001		0.0000	0.0000
Phenol	0.00002		0.0000	0.0000
Pyrene	0.00000		0.0000	0.0000
Styrene	0.00002		0.0000	0.0000
Tetrachloroethane	0.00000		0.0000	0.0000
Toluene	0.00041		0.0003	0.0001
Vinyl Chloride	0.00001		0.0000	0.0000
Xylene	0.00018		0.0001	0.0000
<b>Total</b>			<b>0.0513</b>	<b>0.0128</b>

**Compressor**  
 1 HP            =            2,542.5            Btu/hr            =            0.002543    MMBtu/hr  
 Capacity       =            125            HP            =            0.3178    MMBtu/hr  
 Hrs               =            8,760  
 Limited Hrs    =            500

	Emission Factor		Potential Emissions		Limited Emissions	
	lb/MMBtu		lbs/hr	tons/yr	lbs/hr	tons/yr
Benzene	0.0009		0.0003	0.0013	0.0003	0.0001
Toluene	0.0004		0.0001	0.0006	0.0001	0.0000
Xylenes	0.0003		0.0001	0.0004	0.0001	0.0000
Propylene	0.0026		0.0008	0.0036	0.0008	0.0002
1,3 Butadine	< 0.0000		0.0000	0.0001	0.0000	0.0000
Formaldehyde	0.0012		0.0004	0.0016	0.0004	0.0001
Acetaldehyde	0.0008		0.0002	0.0011	0.0002	0.0001
Acrolein	< 0.0001		0.0000	0.0001	0.0000	0.0000
Napthalene	0.0001		0.0000	0.0001	0.0000	0.0000
<b>Total</b>			<b>0.0020</b>	<b>0.0089</b>	<b>0.0020</b>	<b>0.0005</b>