Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

8/31/2015

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Mr. Arthur Thomas
POET Biorefining - Fostoria
2111 Sandusky Street
Fostoria, OH 44830

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0374010235
Permit Number: P0118846
Permit Type: Renewal
County: Seneca

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: Ohio EPA-NWDO

Response to Comments

Facility ID:	0374010235
Facility Name:	POET Biorefining - Fostoria
Facility Description:	Industrial Organic Chemicals, n.e.c.
Facility Address:	2111 Sandusky Street Fostoria, OH 44830 Seneca County
Permit:	P0118846, Permit-To-Install and Operate - Renewal
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Advertiser Tribune on 06/26/2015. The comment period ended on 07/26/2015.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: None

a. Comment: Justin Raus is no longer with POET. Please address the permit to Arthur Thomas, General Manager, or Ty Oliver, Plant Engineer. Both are identified in eBusiness as contacts for POET.

Response: Arthur Thomas is listed as the Primary/Billing/Owner Contact, Ty Oliver is listed as On Site and Operator Contact. Justin Raus is no longer listed as a contact.

b. Comment: Page 11 of 34: The draft permit indicates that the electrical generator is 2000 kW capacity. The generator that was originally installed has a capacity of 2190 kW or 2937 hp. The application incorrectly indicated that the horsepower rating was 2640. For your information, a picture of the emission control information nameplate on the generator is provided in Attachment A. For completeness and clarity, POET is informing OEPA that the installed generator was ordered on July 23, 2007. Therefore, under 40 CFR 63 Subpart ZZZZ (the RICE MACT) and 40 CFR 60 Subpart IIII (RICE New Source Performance Standard), the generator is a “new” generator. With the knowledge that the generator capacity is 2000 kW (2937 hp), the potential to emit calculations have been updated and are provided in Attachment B. POET requests the emissions in the draft permit be modified for the electrical generator, P012, to:

	Limit in lb/hr	Limit in ton/yr
Nitrogen Dioxides (NOx)	30.87	1.54
Carbon Monoxide (CO)	1.35	0.07
Sulfur Dioxide (SO2)	11.75	0.54
Volatile Organic Compounds (VOC)	1.08	0.05
Particulate Matter (PM10)	0.50	0.03

Response: Based upon the generator being 2190 kW, OEPA has a few slightly different numbers. The following table summarizes the emissions limits set in the permit:

	Limit in lb/hr	Limit in ton/yr
Nitrogen Dioxides (NOx)	30.87	1.54
Carbon Monoxide (CO)	1.29	0.065*
Sulfur Dioxide (SO2)	11.74*	0.587*
Volatile Organic Compounds (VOC)	1.03*	0.052*
Particulate Matter (PM10)	0.48*	0.024*

* Numbers were rounded up

c. Comment: In a June 15, 2015 email to Ohio EPA, POET requested that the carbon monoxide limit for B001 and B002 be increased from 1.0 lb/hr to 1.5 lb/hr. The current permit limit is very close to actual emission rates for Boiler #2 based on stack testing results from March 24, 2009. Stack testing results from similar facilities show limits in

excess of 1.0 lb/hr. Please modify the carbon monoxide limit for B001 and B002 to 1.5 lbs/hr and 6.57 tons/yr.

Response: Change made, limit increased to 1.5 lbs/hr for each boiler

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
POET Biorefining - Fostoria

Facility ID:	0374010235
Permit Number:	P0118846
Permit Type:	Renewal
Issued:	8/31/2015
Effective:	8/31/2015
Expiration:	8/31/2020

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install and Operate
for
POET Biorefining - Fostoria

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Authorization

Facility ID:	0374010235
Application Number(s):	A0053340
Permit Number:	P0118846
Permit Description:	Due to the recent USEPA decision concerning the Tailoring rule, POET Biorefining - Fostoria is no longer considered a major stationary source for GHGs, thus this permit action is to revert the facility back to a FEPTIO source.
Permit Type:	Renewal
Permit Fee:	$0.00
Issue Date:	8/31/2015
Effective Date:	8/31/2015
Expiration Date:	8/31/2020

Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

POET Biorefining - Fostoria
2111 Sandusky Street
Fostoria, OH 44830

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s))listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0118846
Permit Description: Due to the recent USEPA decision concerning the Tailoring rule, POET Biorefining - Fostoria is no longer considered a major stationary source for GHGs, thus this permit action is to revert the facility back to a FEPTIO source.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**P012**
Company Equipment ID:	EU037
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: 143 mmBtu/hr NG Boilers

Emissions Unit ID:	**B001**
Company Equipment ID:	EU027
Superseded Permit Number:	
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**B002**
Company Equipment ID:	EU028
Superseded Permit Number:	
General Permit Category andType:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

  You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as beingpermanently shut down without first applying for and obtaining a permit pursuantto OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) None.

2. All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

C. Emissions Unit Terms and Conditions

1. P012, EU037

Operations, Property and/or Equipment Description:

2190 kW emergency electrical generator (2937 hp)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)g. and d)(4)-d)(6).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)a., b)(2)b., c)(2), d)(1), e)(1) and f)(1)e.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	Nitrogen oxides (NOx) emissions shall not exceed 30.87 pounds per hour (lbs/hr) and 1.54 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 1.29 lbs/hr and 0.065 ton per rolling, 12-month period. Sulfur dioxide (SO2) emissions shall not exceed 11.74 lbs per hour and 0.587 ton/rolling, 12-month period. Volatile organic compounds emissions shall not exceed 1.03 lb/hr and 0.052 ton/rolling, 12-month period. Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.48 lb/hr and 0.024 ton per rolling, 12-month period. See b)(2)b., b)(2)f. and c)(2).
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)a.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-11(B)(5)(b)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
e.	OAC rule 3745-18-06	See b)(2)c.
f.	40 CFR Part 60 Subpart IIII	See b)(2)d.
g.	OAC rule 3745-114-01	See d)(4)-d)(6)
h.	OAC rule 3745-31-05(A)(3), as effective 12/1/2006	See b)(2)e.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements for this emissions unit have been determined to compliance with the federally enforceable requirements established in accordance with OAC rule 3745-31-05(D).

The permittee has satisfied the BAT requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. Permit to install (PTI) P0104362 establishes the following federally enforceable emission limitations based on an hours of operation restriction [c)(2)] and hourly emission limitations for purposes of avoiding Title V applicability:

i. 1.54 tons NOx per rolling, 12-month period;

ii. 0.065 ton CO per rolling, 12-month period;

iii. 0.052 ton VOC per rolling, 12-month period, and

iv. 0.024 ton PM10 per rolling, 12-month period.

c. This emissions unit is exempt from the requirements of OAC rule 3745-18-06, pursuant to OAC rule 3745-18-06(B).

d. This emissions unit is subject to 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion. The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart IIII. The permittee shall also comply with all applicable requirements of 40 CFR Part 60, Subpart A. (General Provisions) as identified in Table 8 of 40 CFR Part 60, Subpart IIII.

e. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of NOx, CO, SO2 PM10 and VOC fromthis air contaminant source since the potential to emit, for each pollutant, is less than 10 tons per year taking into consideration the federally enforceable restrictions established under OAC rule 3745-31-05(D) in this permit.

f. All emissions of particulate matter are PM10.

c) Operational Restrictions

(1) The permittee shall combust only diesel fuel that meets the per gallon standards of 40 CFR 80.510.

(2) The maximum annual hours of operation for this emissions unit shall not exceed 100 hours per year, based upon a rolling 12-month summation of the operating hours.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the hours of operation, upon issuance of this permit.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the number of hours of operation;

b. the calculated monthly emission rate for CO using the following equation: CO emissions (tons) = (# of hours of operation) x (potential hourly CO emissions (lbs/hr)) x (1 ton/2000 lbs) = d(1)a. x (1.29lbs CO) x (1/2000 lbs);

c. the calculated monthly emission rate for NOx using the following equation: NOx emissions (tons) = (# of hours of operation) x (potential hourly NOx emissions (lbs/hr)) x (1 ton/2000 lbs) = d(1)a. x (30.87lbs NOx) x (1/2000 lbs);

d. the calculated monthly emission rate of VOC using the following equation: VOC emissions (tons) = (# of hours of operation) x (potential hourly VOC emissions (lbs/hr)) x (1 ton/2000 lbs) = d(1)a. x (1.03lbs VOC) x (1/2000 lbs);

e. the calculated monthly emission rate of SO2 using the following equation: SO2 emissions (tons) = (# of hours of operation) x (potential hourly SO2 emissions (lbs/hr)) x (1 ton/2000 lbs) = d(1)a. x (11.74lbs SO2) x (1/2000 lbs);

f. the calculated monthly emission rate of PM10 using the following equation: PM10 emissions (tons) = (# of hours of operation) x (potential hourly PM10 emissions (lbs/hr)) x (1 ton/2000 lbs) = d(1)a. x (0.48lb PM10) x (1/2000 lbs)

g. the following summations:

i. the rolling, 12-month CO emission rate, in tons;

ii. the rolling, 12-month NOx emission rate, in tons;

iii. the rolling, 12-month VOC emission rate, in tons;

iv. the rolling, 12-month SO2 emission rate, in tons;

v. the rolling, 12-month PM10 emission rate, in tons; and

vi. the rolling, 12-month number of hours of operation.

(2) For each day during which the permittee burns a fuel other than diesel fuel the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit. The permittee shall also maintain documentation on the sulfur content of all fuels burned.

(3) The permittee shall use records of fuel supplier certification to demonstrate compliance with the operational restriction in c)(1). Records of fuel supplier certification shall include the following information:

a. the name of the oil supplier; and

b. a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in c)(1) above.

(4) The federally enforceable permit-to-install (FEPTI) application for these emissions unit(s), B001, B002, J001, P007, P008, P009, P010 and P012, were evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA

guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

   $$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

   <u>Pollutant</u>: formaldehyde

   TLV (mg/m^3): 368

   Maximum Hourly Emission Rate (lbs/hr): 0.40 (permit total)

   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.14

   MAGLC (ug/m^3): 6.47

   <u>Pollutant</u>: Acetaldehyde

   TLV (mg/m^3): 33.2

   Maximum Hourly Emission Rate (lbs/hr): 4.50 (permit total)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 85.16

MAGLC (ug/m^3): 790

Pollutant: Hexane

TLV (mg/m^3): 176.23

Maximum Hourly Emission Rate (lbs/hr): 0.70 (permit total)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.77

MAGLC (ug/m^3): 4,196

The permittee, has demonstrated that emissions of hexane, formaldehyde, and acetaldehyde, from emissions unit(s) B001, B002, J001, P007, P008, P009, P010, and P012, are each calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

(5) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the Toxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final PTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions

(6) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. the rolling, 12-month restriction of 100 hours.

ii. the rolling, 12-month CO emission limitation of 0.065 ton.

iii. the rolling, 12-month NOx emission limitation of 1.54 tons.

iv. the rolling, 12-month VOC emission limitation of 0.052 ton.

v. the rolling, 12-month SO2 emission limitation of 0.587 ton.

vi. the rolling, 12-month PM10 emission limitation of 0.024 ton; and

vii. the sulfur content fuel restriction specified in c)(1).

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted,electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel fuel as specified in c)(1) was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

f) Testing Requirements

(1) Compliance with the emission limitations and/or control requirements specified in b)(1)of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions Limitation:</u>

1.29lbs CO/hr

<u>Applicable Compliance Method:</u>

The hourly allowable CO emission limitation was developed by multiplying an emission factor of 0.20 g/hp-hr (manufacturer data) by the maximum power output of 2190 kW, the conversion factors of 1.34 hp/kW and lb/454 gram.

If required, compliance with the hourly allowable CO emission limitation shall be determined according to test Methods 1-4, and 10, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

b. <u>Emissions Limitation:</u>

30.87lbs NOx/hr

<u>Applicable Compliance Method:</u>

The hourly allowable NOx emission limitation was developed by multiplying an emission standard of 6.40 g/kW-hr (40 CFR 89.112 Table 1) by the maximum power output of 2190 kW and the conversion factor lb/454 gram.

If required, compliance with the hourly allowable NOx emission limitation shall be determined according to test Methods 1-4, and 7, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

c. Emissions Limitation:

1.03lbs VOC/hr

Applicable Compliance Method:

The hourly allowable VOC emission limitation was developed by multiplying an emission factor of 0.16 g/hp-hr (manufacturer data) by the maximum power output of 2190 kW, the conversion factors of 1.34 hp/kW and lb/454 gram.

If required, compliance with the hourly allowable VOC emission limitation shall be determined according to test Methods 1-4, and 25 or 25A, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

d. Emissions Limitation:

11.74 lbs SO2/hr

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was developed by multiplying an emission factor of 0.004 lb/hp-hr (AP-42, Table 3.4-1, revised 10/96) by the maximum power output of 2190 kW and the conversion factor of 1.34 hp/kW.

If required, compliance with the hourly allowable SO2 emission limitation shall be determined according to test Methods 1-4, and 6 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

e. Emissions Limitations:

0.065 ton CO per rolling, 12-month period.

1.54 tons NOx per rolling, 12-month period.

0.052 ton VOC per rolling, 12-month period.

0.587 ton SO2/rolling, 12-month period.

0.024 ton PM10 per rolling, 12-month period

Applicable Compliance Method:

Compliance with the ton per rolling 12-month period emission limitations above shall be demonstrated by the record keeping requirements established in d)(1) of this permit.

f. Emissions Limitation: 0.48lb PM10/hr

Applicable Compliance Method:

The hourly allowable PM10 emission limitation was developed by multiplying an emission factor of 0.075 g/hp-hr (manufacturer data) by the maximum power output of 2190 kW, the conversion factors of 1.34 hp/kW and lb/454 gram.

If required, compliance with the hourly allowable PM10 emissions limitation shall be determined according to test Methods 201 and 202, as set forth in 40 CFR Part 51, Appendix M.

g. Emissions Limitation:

Visible PE from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.

2. Emissions Unit Group -143 mmBtu/hr NG Boilers: B001,B002,

EU ID	Operations, Property and/or Equipment Description
B001	143 mmBtu/hr natural gas fired boiler
B002	143 mmBtu/hr natural gas fired boiler

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. b)(1)g., d)(8) - d)(11) and e)(1).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)a., b)(2)b., d)(1), e)(2) and f)(1)a.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	Nitrogen oxides (NOx) emissions shall not exceed 43.84 tons per rolling, 365-day period for emissions units B001 and B002 combined. [See b)(2)a.]
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	1.5 lbs carbon monoxide (CO)/hr and 6.57 TPY 0.27 lb particulate emissions equal to or less than 10 microns in size (PM10)/hr and 1.18 TPY 0.80 lbs volatile organic compounds (VOC)/hr and 3.50 TPY. See b)(2)b.
c.	40 CFR Part 60, Subpart Db	NOx emissions shall not exceed 0.20 pounds per million British thermal units (lbs/mmBtu), as a 30-day rolling average.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		[See b)(2)c. and b)(2)d.]
d.	OAC rule 3745-31-05 (A)(3), as effective 12/1/06	See b)(2)e.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-10(B)(1)	See b)(2)f.
g.	OAC rule 3745-114-01	See d)(8) through d)(11) and e)(1)

(2) Additional Terms and Conditions

a. This permit establishes the following federally enforceable emission limitation for purposes of avoiding Prevention of Significant Deterioration (PSD) and Title V applicability:

The emissions of NOx from this emissions unit shall not exceed 43.84 tpy, based upon a rolling, 365-day period. Rolling emissions limitations have been established in permit-to-install(PTI) P0104508 issued on June 26, 2009 and, as such, rolling, NOx emission records exist. The applicant shall use the existing records to determine compliance upon startup under this permit. Therefore, it is not necessary to establish federally enforceable restrictions for the first 12 months of operation under the provisions of this permit.

b. The following requirements contained in this permit satisfy the BAT requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001:

i. use of low NOx burners

ii. the firing of only natural gas

iii. compliance with the following limitations:

(a) 1.5 lb CO/hr and 6.57 TPY

(b) 1.09 lbs PM10/hr and 4.77 TPY

(c) 0.80 lb VOC/hr and 3.50 TPY

iv. compliance with the following regulations:

(a) OAC rule 3745-17-07(A)(1)

(b) OAC rule 3745-17-10(B)(1)

(c) 40 CFR Part 60, Subpart Db

(d) OAC rule 3745-31-05(D)

On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, the requirements of 3745-31-05(A)(3) as effective November 30, 2001 will no longer apply.

*The emissions of sulfur dioxide (SO2) from this emissions unit have been determined to be negligible and are therefore not included in this permit.

c. The NOx standard shall apply at all times including periods of startup, shutdown, or malfunction.

d. Each continuous NOx monitoring (or predictive NOx) system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 or Performance Specification 16 in the case of a predictive NOx monitoring system. At least 45 days before commencing certification testing of the continuous NOx monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NOx emissions from the continuous monitor(s) (or predictive system), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F (or Performance Specification 16 in the case of a predictive NOx monitoring system. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring (or predictive) system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60. (or Performance Specification 16 quality control/quality assessment requirements in the case of a predictive NOx monitoring system.

e. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of CO, PM10 and VOC fromthis air contaminant source since the uncontrolled potential to emit for CO, PM10 and VOC are each less than 10 tons per year.

f. The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain daily records of the following information:

a. the NOx emission rate, in lbs/day, as quantified by the CEM/PEM;

b. the rolling, 365-day summation of the NOx emissions.

(2) The permittee shall submit to the Administrator forapproval a plan that identifies the operatingconditions to be monitoredunder 40 CFR 60.48b(g)(2) and the records tobe maintained under 40 CFR 60.49b(j). Thisplan shall be submitted to the Administratorfor approval within 360 days ofthe initial startup of the affected facility.If the plan is approved, the owneror operator shall maintain records ofmeasured or predicted nitrogen oxide emission ratesand the monitored operating conditions,including steam generating unitload, identified in the plan. The planshall:

a. Identify the specific operatingconditions to be monitored and the relationshipbetween these operatingconditions and NOxemission rates (i.e.,ng/J or lbs/MMBtu heat input). Steamgenerating unit operating conditionsinclude, but are not limited to, the degreeof staged combustion (i.e., theratio of primary air to secondary and/or tertiary air) and the level of excessair (i.e., flue gas O2 level);

b. Include the data and informationthat the owner or operator used toidentify the relationship between NOxemission rates and these operating conditions;and

c. Identify how these operating conditions,including steam generatingunit load, will be monitored under40 CFR 60.48b(g) on an hourly basis by theowner or operator during the period ofoperation of the affected facility; thequality assurance procedures or practicesthat will be employed to ensurethat the data generated by monitoringthese operating conditions will be representativeand accurate; and the typeand format of the records of these operatingconditions, including steam generatingunit load, that will be maintainedby the owner or operator under40CFR 60.49b(j).

(3) The permittee shall maintain records of the followinginformation for each steam generatingunit operating day:

a. Calendar date;

b. The average hourly NOx emissionrates (expressed as NO2) (ng/J or lb/MMBtu heat input) measured or predicted;

c. The 30-day average NOx emissionrates (ng/J or lb/MMBtu heat input)calculated at the end of each steamgenerating unit operating day from themeasured or predicted hourly nitrogenoxide emission rates for the preceding30 steam generating unit operatingdays;

d. Identification of the steam generatingunit operating days when the calculated 30-day average NOx emission rates are in excess of the NOx emissionsstandards under § 60.44b, with thereasons for such excess emissions aswell as a description of corrective actionstaken;

e. Identification of the steam generatingunit operating days for whichpollutant data have not been obtained,including reasons for not obtaining sufficientdata and a description of correctiveactions taken;

f. Identification of the times whenemission data have been excluded fromthe calculation of average emissionrates and the reasons for excludingdata;

g. Identification of "F" factor usedfor calculations, method of determination,and type of fuel combusted;

h. Identification of the times whenthe pollutant concentration exceeded full span of the CEMS (or highest value in the PEMS database if PEMS are employed);

i. Description of any modificationsto the CEMS (or PEMS) that could affect the abilityof the CEMS (or PEMS) to comply with PerformanceSpecification 2 and 3 (or Performance Specification 16 if PEMS are employed); and

j. Results of daily CEMS drift testsand quarterly accuracy assessments asrequired under appendix F, Procedure 1of this part (or daily sensor evaluations and quarterly Relative Accuracy Audits in the case of PEMS employment).

(4) The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NO_x monitoring (or predictive NOx) system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 or Performance Specification 16 in the case of a predictive NOx monitoring system. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

a. Each continuous monitoring or predictive system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

(5) The permittee shall operate and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous NO_x monitoring system including, but not limited to:

a. emissions of NO_x in parts per million on an instantaneous (one-minute) basis;

b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

(6) In lieu of installing a continuous emissions monitoring system (CEMS) for NOx, the permittee may elect to installa predictive emission monitoring system (PEMS) for the NOx emissions. The PEMS must meet 40 CFR Part 60, Appendix B, Performance Specification 16.

After initial testing to assure the PEMS meets Performance Specification 16, ongoing qualityassurance/quality control shall include a relative accuracy test audit (RATA) once every four (or less) calendarquarters. RATA requirements are in addition to any and all PEMS requirements. RATA testing protocol shall be submitted to the Director (theOhio EPA, Central Office) for approval prior to installation of the PEMS.

(7) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(8) The federally enforceable permit-to-install (FEPTI) application for these emissions unit(s), B001, B002, J001, P007, P008, P009, P010 and P012, were evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

   TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

   <u>Pollutant</u>: formaldehyde

   TLV (mg/m^3): 368

   Maximum Hourly Emission Rate (lbs/hr): 0.40 (permit total)

   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.14

   MAGLC (ug/m^3): 6.47

   <u>Pollutant</u>: Acetaldehyde

   TLV (mg/m^3): 33.2

   Maximum Hourly Emission Rate (lbs/hr): 4.50 (permit total)

   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 85.16

   MAGLC (ug/m^3): 790

Pollutant: Hexane

TLV (mg/m^3): 176.23

Maximum Hourly Emission Rate (lbs/hr): 0.70 (permit total)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.77

MAGLC (ug/m^3): 4,196

The permittee, has demonstrated that emissions of hexane, formaldehyde, and acetaldehyde, from emissions unit(s) B001, B002, J001, P007, P008, P009, P010, and P012, are each calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

(9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the Toxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final PTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions

(10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

(1) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the “Toxic Air Contaminate Statute”, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s); and

d. a summary of the results of the updated modeling, including the input changes; and

e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect. The report shall be submitted by January 31 and shall cover the previous calendar year.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the rolling, 365 day emission limitation for NOx

b. the probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted,electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring (or predictive) system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_x and/or other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring (or NOx predictive emissions monitoring) system (CEMS or PEMS), including any change to the hardware, changes to the software or look-up data that may affect CEMS or PEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total NO_x emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NO_x monitoring or predictive system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor or predictive monitor was out-of-control and the compliant results following any corrective actions;

xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring or predictive system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime** of the continuous NO_x monitoring or predictive system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring or predictive system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit.

(4) The owner or operator of each affected facility subject to the NOx standard of 40 CFR 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of 40 CFR 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the

operating conditions to be monitored under 40 CFR 60.48b(g)(2) and the records to be maintained under 40 CFR 60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan.The plan shall:

a. Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NOx emission rates (i.e., ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/ or tertiary air) and the level of excess air (i.e., flue gas O2 level);

b. Include the data and information that the owner or operator used to identify the relationship between NOx emission rates and these operating conditions; and

c. Identify how these operating conditions, including steam generating unit load, will be monitored under 40 CFR 60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under 40 CFR 60.49b(j).

(5) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(6) The permittee shall identify in the annual permit evaluation report the following information during the 12-month reporting period for this/these emissions unit(s):

a. any deviations from emission limitations, operational restrictions, andcontrol device operating parameter limitations that have been detected bythe testing, monitoring, and recordkeeping requirements specified in this permit;

b. the probable cause of such deviations; and

c. any corrective actions or preventive measures which have been or will betaken to remedy the deviations.

If no deviations occurred during the reporting period, the permittee shall identify in the permit evaluation report that no deviations occurredduring the reporting period.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:
0.20 lb NOx/mmBtu, as a 30-day rolling average and 43.84 tons per year, based upon a rolling 365-day period.

Applicable Compliance Method:
Ongoing compliance with the NOx emission limitations contained in this permit shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60. If required, compliance shall be demonstrated through emission testing conducted in accordance with Methods 1-4 and 7 of 40 CFR Part 60, Appendix A.

Compliance with the annual limitation shall be based upon record keeping requirement in d)(1).

b. Emissions Limitations:
1.5 lbs carbon monoxide (CO)/hr and 6.57 TPY

Applicable Compliance Method:
The hourly allowable CO emission limitation was developed based off a March 24-25, 2009 compliant stack test and through similar stack tests at other POET facilities. If required, compliance shall be demonstrated through emission testing conducted in accordance with Methods 1 - 4 and 10 of 40 CFR Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hours/year, and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

c. Emissions Limitations:
0.27 lb PM10/hr; 1.18 TPY PM10

Applicable Compliance Method:
The hourly allowable PM10 emission limitation was developed by multiplying the emission factor of 1.9 lbs of PM10/mm scf (USEPA, AP-42 emission factor, Table 1.4-2, revised 7/98) by the maximum hourly heat input rate of 143 mmBtu/hr, and then dividing by the heating value of 1000 mmBtu/mm scf.

If required, compliance with the PM10 limitation shall be determined in accordance with the test methods and procedures specified in 40 CFR Part 51, Appendix M, Methods 201/201 A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office (NWDO).

The annual emission limitation was developed by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hours/year, and then by 0.0005 ton/lb. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

d. Emissions Limitation
0.80 lb VOC/hr; 3.50 TPY VOC

Applicable Compliance Method:
The hourly VOC emission limitation was developed by multiplying the emission factor of 5.5 lbs of VOC per million standard cubic feet (mm scf) [USEPA AP-42 Table 1.4-2, revised 7/98] by the maximum hourly heat input rate of 143 mmBtu/hr, and then dividing by the heating value of 1000 mmBtu/mm scf.

If required, compliance with the hourly VOC limitation shall be determined in accordance with the test methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25 or 25A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office (NWDO).

The annual emission limitation was developed by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hours/year, and then by 0.0005 ton/lb. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

e. Emissions Limitation:
Visible PE from the stack serving this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be demonstrated in accordance with OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.