



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

7/9/2015

Certified Mail

Mr. Cliff Brannon  
 POET Biorefining - Marion  
 1660 Hillman-Ford Road  
 Marion, OH 43302

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	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

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0351010207  
 Permit Number: P0118995  
 Permit Type: Renewal  
 County: Marion

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Marion Star. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
 Permit Review/Development Section  
 Ohio EPA, DAPC  
 50 West Town Street Suite 700  
 PO Box 1049  
 Columbus, Ohio 43216-1049

and Ohio EPA DAPC, Northwest District Office  
 347 North Dunbridge Road  
 Bowling Green, OH 43402

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461.

Sincerely,

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

Cc: U.S. EPA Region 5 Via E-Mail Notification  
 Ohio EPA-NWDO



## PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: <http://epa.ohio.gov/actions.aspx> or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email: [HClerk@epa.ohio.gov](mailto:HClerk@epa.ohio.gov)

Draft Air Pollution Permit-to-Install and Operate Renewal

POET Biorefining - Marion

Hillman-Ford Road,, Marion, OH 43302

ID#:P0118995

Date of Action: 7/9/2015

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

The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the ID # or: Andrea Moore, Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402. Ph: (419)352-8461



## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

POET Biorefining-Marion is a fuel ethanol production facility in the town of Marion, Ohio (Marion County). POET produces fuel ethanol by fermenting corn with subsequent distillation.

3. Facility Emissions and Attainment Status:

Due to the recent USEPA decision concerning the Tailoring rule, POET Biorefining Marion (POET) is no longer considered a major stationary source for GHGs, thus this permit action is to revert the facility back to a FEPTIO source. Synthetic minor restrictions for emissions units B001, B002 and P012 have been in effect, despite the Title V status. Marion County is classified as attainment for all pollutants.

4. Source Emissions:

		NOx	CO	VOC	PM10	SO2	Lead
<b>Synthetic Minor emissions units</b>							
B001, B002 (individually)	Boilers #1 and #2		9.20	3.50		0.09	0.0005
B001, B002 (combined)	Boilers #1 and #2	43.8	18.40	7.0	2.36	0.18	0.0010
P012	Generator	4.48	3.09	1.16	0.18	0.01	
		<b>48.28</b>	<b>21.49</b>	<b>8.16</b>	<b>2.54</b>	<b>0.19</b>	<b>0.001</b>
<b>Non-synthetic Minor emissions units</b>							
F001	Paved Roadways				0.89		
J001	Ethanol and gasoline loading operations	1.32	3.32	4.32			
P001	Grain handling				0.45		
P002 – P006	Hammermills #1 -5				7.00		
P007 P008 P009 (combined)	Ethanol production Dryer no. 1 Dryer no. 2	48.18	52.66	55.71	43.8	0.39	1.68E-5
P010	DDGS cooling and storage			18.06	2.7		
P011	Cooling tower				4.99		
P801	Fugitive VOC leaks			8.30			
P802	Wetcake Storage and loadout			2.19			
P901 P902 (combined)	Grain receiving, transferring, conveying				10.36		
T001	190 proof ethanol tank			0.34			
T002	200 proof ethanol tank			0.99			
T003	Denatured ethanol tank			0.20			

T004	#1 Denatured ethanol tank	0.20				
T005	#2 Denaturant storage tank	0.97				
		<b>49.5</b>	<b>55.98</b>	<b>91.28</b>	<b>70.19</b>	<b>0.19</b>
						<b>0.0000168</b>
Facility Total		<b>97.78</b>	<b>77.47</b>	<b>99.44</b>	<b>72.73</b>	<b>0.58</b>
						<b>.0010168</b>

5. Conclusion:

Greenhouse Gas emissions are no longer treated as a pollutant for purposes of defining a “major source” in the Title V context. With this change, POET Biorefining - Marion will no longer be considered a Title V facility for permitting purposes.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	97.78
CO	77.47
VOC	99.44
PM10	72.73
SO2	0.58
Lead	0.0010168



**DRAFT**

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

Facility ID:	0351010207
Permit Number:	P0118995
Permit Type:	Renewal
Issued:	7/9/2015
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance





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

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**Draft Permit-to-Install and Operate**

POET Biorefining - Marion

**Permit Number:** P0118995

**Facility ID:** 0351010207

**Effective Date:** To be entered upon final issuance

## Authorization

Facility ID: 0351010207  
Application Number(s): A0052447  
Permit Number: P0118995  
Permit Description: Due to the recent USEPA decision concerning the Tailoring rule, POET Biorefining - Marion 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 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 7/9/2015  
Effective Date: To be entered upon final issuance  
Expiration Date: To be entered upon final issuance  
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

POET Biorefining - Marion  
Hillman-Ford Road  
Marion, OH 43302

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: P0118995  
 Permit Description: Due to the recent USEPA decision concerning the Tailoring rule, POET Biorefining - Marion 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: P0113311  
 General Permit Category and Type: Not Applicable

**Group Name: Boilers**

<b>Emissions Unit ID:</b>	<b>B001</b>
Company Equipment ID:	EU027
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>B002</b>
Company Equipment ID:	EU028
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



**Draft Permit-to-Install and Operate**  
POET Biorefining - Marion  
**Permit Number:** P0118995  
**Facility ID:** 0351010207  
**Effective Date:** To be entered upon final issuance

## **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 Ohio EPA DAPC, Northwest District Office 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 being permanently shut down without first applying for and obtaining a permit pursuant to 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.



**Draft Permit-to-Install and Operate**  
POET Biorefining - Marion  
**Permit Number:** P0118995  
**Facility ID:** 0351010207  
**Effective Date:** To be entered upon final issuance

## **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.



**Draft Permit-to-Install and Operate**  
POET Biorefining - Marion  
**Permit Number:** P0118995  
**Facility ID:** 0351010207  
**Effective Date:** To be entered upon final issuance

## **C. Emissions Unit Terms and Conditions**

**1. P012, EU037**

**Operations, Property and/or Equipment Description:**

2000 kW non-emergency electrical generator

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)h. and 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)d., b)(2)d., c)(1), d)(1) and e)(1).

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.	40 CFR Part 60, Subpart IIII 40 CFR 60.4204(b) 40 CFR 60.4201(a) Table 1 to 40 CFR 89.112, Tier 2	The exhaust emissions from this engine shall not exceed:  0.20 gram particulate matter emissions (PM)/kW-hr [see b)(2)k.]  6.4 grams nitrogen oxides (NOx) + non-methane hydrocarbons (NMHC)/kW-hr  3.5 grams carbon monoxide (CO)/kW-hr  See terms b)(2)a. through b)(2)c.
b.	40 CFR 60.4207(b) 40 CFR 80.510(b)	The sulfur content of the diesel fuel burned in this emissions unit shall not exceed 15 ppm or 0.0015% sulfur by weight. See terms b)(2)c., c)(2), d)(3), and e)(1).
c.	40 CFR 89.113	20% opacity during the acceleration



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(certified by manufacturer)	mode 15% opacity during the lugging mode 50% opacity during the peaks in either the acceleration or lugging modes
d.	OAC rule 3745-31-05(D)	3.09 tons CO per rolling, 12-month period  4.48 tons NOx per rolling, 12-month period  0.18 ton particulate matter less than or equal to 10 microns in size (PM10) per rolling, 12-month period  1.16 tons VOC per rolling, 12-month period  0.01 ton sulfur dioxide (SO2) per rolling, 12-month period  See b)(2)d. and c)(1)
e.	OAC rule 3745-17-07(A)	Visible particulate matter emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule
f.	OAC rule 3745-17-11(B)(5)(b)	See b)(2)f.
g.	OAC rule 3745-18-06	See b)(2)g.
h.	OAC rule 3745-114-01 ORC 3704.03(F)	See d)(6)
i.	40 CFR, Part 63, Subpart ZZZZ 40 CFR 63.6590(c)	See b)(2)h.
j.	OAC rule 3745-110-03(F)	See b)(2)i.
k.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)k.
l.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)l.

(2) Additional Terms and Conditions

- a. The stationary compression ignition (CI) internal combustion engine (ICE) is subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart IIII, the standards of performance for stationary CI ICE.
- b. The stationary CI ICE has been or shall be purchased certified by the manufacturer, to emission standards as stringent as those identified in 40 CFR 60.4201(a) and found in Tier 2 of 40 CFR 89.112, Table 1, for engines greater

than 750 horsepower (560 kilowatt), and to the opacity standards found in 40 CFR 89.113.

- c. The quality of the diesel fuel burned in this emissions unit shall meet the following specifications on an “as received” basis:
  - i. a sulfur content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.0015 pound sulfur dioxide/mmBtu actual heat input; and 15 ppm sulfur or 0.0015% sulfur by weight;
  - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent; and
  - iii. a heating value greater than 135,000 Btu/gallon.

Compliance with the above-mentioned specifications shall be determined by using the analytical results provided by the permittee or oil supplier for each shipment of oil.

- d. This permit establishes the following federally enforceable emission limitations based on an hours of operation restriction [See c)(2)] and hourly emission limitations for purposes of limiting the potential to emit:
  - i. 3.09 tons CO per rolling, 12-month period;
  - ii. 4.48 tons NO<sub>x</sub> per rolling, 12-month period;
  - iii. 0.01 ton SO<sub>2</sub> per rolling, 12-month period;
  - iv. 0.18 ton PM<sub>10</sub> per rolling, 12-month period; and
  - v. 1.16 tons VOC per rolling, 12-month period.
- e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), have been determined to be compliance with the limitations established under 40 CFR Part 60, Subpart IIII.
- f. The emission limitation specified by this rule is less stringent than the emission limitation established for particulate matter pursuant to 40 CFR Part 60, Subpart IIII.
- g. This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(B).
- h. A new area source operating in compliance with Part 60 Subpart IIII is the demonstration of compliance for 40 CFR 63 Subpart ZZZZ.
- i. This engine is exempt from OAC rule 3745-110-03 per OAC rule 3745-110-03(J)(16).
- j. All emissions of particulate matter are PM<sub>10</sub>.

- k. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01, have been determined to be compliance with the emission limitations established under OAC rule 3745-31-05(D) and the requirements of 40 CFR Part 60, Subpart IIII.

The permittee has satisfied the Best Available Technology (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.

- l. 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) do not apply to NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC and PM<sub>10</sub> emissions from this air contaminant source since the calculated annual emission rate for NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC and PM<sub>10</sub> emissions is less than ten tons per year taking into account the federally enforceable restriction on the number of hours of operation under OAC rule 3745-31-05(D).

c) Operational Restrictions

- (1) The maximum annual operating hours for this emissions unit shall not exceed 400 hours, based upon a rolling, 12-month summation of the monthly 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.]

- (2) The stationary CI ICE and any control device shall be installed, operated, and maintained according to the manufacturer's emission-related written instructions and the permittee shall only change those emission-related settings that are allowed by the manufacturer. The CI ICE must also be installed and operated to meet the applicable requirements from 40 CFR Part 89, Control of Emissions from New and In-use Non-road CI ICE; and Part 1068, the General Compliance Provisions for Engine Programs. The permittee shall operate and maintain the stationary CI ICE to achieve the emissions standards established in 40 CFR 60.4204 over the entire life of the engine(s).

- (3) Diesel fuel burned in the CI, ICE shall not exceed the limit for sulfur as specified by 40 CFR 80.510(b), i.e., the maximum sulfur content of diesel fuel shall not exceed 15 ppm or 0.0015% sulfur by weight.

- (4) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached.

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; and
  - b. the rolling, 12-month summation of the 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 maintain documents provided by the oil supplier for each shipment of diesel fuel to demonstrate compliance with the applicable SO<sub>2</sub> emissions standard. These documents must include the following information pursuant to 40 CFR 80.592(a):
  - 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 ultra-low sulfur diesel.
- (4) The permittee shall maintain the manufacturer's certification, to the applicable Tier 2 emission standards in Table 1 of 40 CFR 89.112, on site or at a central location for all facility ICE and it shall be made available for review upon request. If the manufacturer's certification is not kept on site, the permittee shall maintain a log for the location of each ICE and it shall identify the agency-assigned emissions unit number, the manufacturer's identification number, and the identification number of the certificate. The manufacturer's operations manual and any written instructions or procedures developed by the permittee and approved by the manufacturer shall be maintained at the same location as the ICE.
- (5) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the permittee shall keep records of the date, time, and any corrective action(s) taken in response to the notification from the backpressure monitor, that the high backpressure limit of the engine has been approached or exceeded.
- (6) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified federally PTI prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition

of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports which identify the following:
  - 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 of this permit:
    - i. All exceedances of the rolling, 12-month restriction of 400 hours;
    - ii. any period of time (date and number of hours) that the quality of oil burned in this emissions unit did not meet the requirements established in 40 CFR 80.510(b), based upon the required fuel records;
  - 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 21 (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) If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the permittee shall include in the PER any records of the date, time, and any corrective action(s) taken in response to the notification from the monitor that the backpressure has been approached or exceeded.
- (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 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. Opacity Limitations:

20% opacity during the acceleration mode

15% opacity during the lugging mode

50% opacity during the peaks in either the acceleration or lugging modes

Applicable Compliance Method:

The permittee shall demonstrate compliance with the opacity standards of 40 CFR 89.113 based on the standard certification.

[The ICE was purchased certified to the opacity standards of 40 CFR 89.113.]

b. Emission Limitations:

0.18 gram PM/kW-hr

3.5 grams CO/kW-hr

6.4 grams NO<sub>x</sub> + NMHC/kW-hr

Applicable Compliance Method:

Compliance with the emission limitations above shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limit is the emission limitation from Table 1 of 40 CFR 89.112, the Tier 2 exhaust emission standards for diesel engines greater than 750 horsepower (560 kW).

If required, the permittee shall demonstrate compliance with the emission limitations through performance tests conducted in accordance with the provisions in term f)(2) below.

For the purpose of reporting emissions, where the limit is for NO<sub>x</sub> + NMHC, the NO<sub>x</sub> and VOC limits shall be calculated using a ratio of 79.4% NO<sub>x</sub> to 20.6% VOC.\*

$6.4 \text{ g NO}_x + \text{NMHC/kW-hr} \times 20.6\% \text{ NMHC}^* = 1.3 \text{ grams VOC/kW-hr}$

c. Emission Limitation:

Sulfur content 15 ppm or  $\leq 0.0015\%$  by weight sulfur

Applicable Compliance Method:

Compliance shall be demonstrated through the record keeping requirements for the sulfur content of each shipment of diesel oil received. If meeting the

standards in 40 CFR 80.510(b), this calculates to approximately 0.0015lb SO<sub>2</sub>/mmBtu.

d. Emissions Limitations:

4.48 tons NO<sub>x</sub> per rolling, 12-month period  
3.09 tons CO per rolling, 12 month period  
1.16 tons VOC per rolling, 12-month period  
0.18 ton PM<sub>10</sub> per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitation above were developed by multiplying the performance standards by the power output of 2000 kW, the maximum annual operating schedule of 400 hours/year, and then dividing by 907,185 grams/ton. Therefore, provided compliance is maintained with the hourly emission limitations and the rolling, 12-month hours of operation restriction, compliance with the annual emission limitations shall also be demonstrated.

e. Emissions Limitation:

0.01 ton SO<sub>2</sub> per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitation above was developed by multiplying the emission limit of 0.0015 lb SO<sub>2</sub>/mmBtu by the power output of 2000 kW, the conversion factors of 0.007 mmBtu/hp-hr, 1.341 hp/kW, the maximum annual operating schedule of 400 hours/year, and then dividing by 2000 lbs/ton. Therefore, provided compliance is maintained with the hourly emission limitation and the rolling, 12-month hours of operation restriction, compliance with the annual emission limitations shall also be demonstrated.

f. Emission Limitation:

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

Applicable Compliance Method:

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

(2) If it is determined by the Ohio EPA that a compliance demonstration is required through performance testing, it shall be conducted using one of the following test methods or procedures:

a. in accordance with 40 CFR 60.4212, conduct the exhaust emissions testing using the in-use testing procedures found in 40 CFR Part 1039, Subpart F, measuring the emissions of the regulated pollutants as specified in 40 CFR 1065; or



**Draft Permit-to-Install and Operate**

POET Biorefining - Marion

**Permit Number:** P0118995

**Facility ID:** 0351010207

**Effective Date:** To be entered upon final issuance

- b. in accordance with 40 CFR 60.4213, conduct exhaust emissions testing using the test methods identified in Table 7 to Subpart IIII of Part 60.

If demonstrating compliance through the in-use testing procedures in 40 CFR part 1039, Subpart F, exhaust emissions from the stationary CI ICE shall not exceed the “not to exceed” (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112, determined from the following equation:

$$\text{NTE requirement for each pollutant} = 1.25 \times \text{STD}$$

Where:

STD = The standard specified for the pollutant in 40 CFR 89.112.

- g) Miscellaneous Requirements

- (1) None.

**2. Emissions Unit Group -Boilers: B001,B002,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
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)h., d)(8)-d)(11) and e)(2).

(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)a., d)(1) and e)(3).

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.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
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	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  2.1 lbs carbon monoxide (CO)/hr and 9.2 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 ORC 3704.03(F)	See d)(8) through d)(11) and e)(2)

(2) Additional Terms and Conditions

- a. Permit to install (PTI) P0107754 issued 6/29/2011 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 and operate (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) 1.09 lbs PM10/hr and 4.77 TPY
    - (b) 0.80 lb VOC/hr and 3.50 TPY
    - (c) 2.1 lbs CO/hr and 9.20 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 (SO<sub>2</sub>) from this emissions unit have been determined to be negligible and are therefore not included in this permit.

- c. The NO<sub>x</sub> standard shall apply at all times including periods of startup, shutdown, or malfunction.
- d. Each continuous NO<sub>x</sub> monitoring (or predictive NO<sub>x</sub>) 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 NO<sub>x</sub> monitoring system. At least 45 days before commencing certification testing of the continuous NO<sub>x</sub> 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 NO<sub>x</sub> 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 NO<sub>x</sub> monitoring system). The quality assurance/quality control plan and a logbook dedicated to the continuous NO<sub>x</sub> 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 NO<sub>x</sub> monitoring system).

- e. This rule 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, PM<sub>10</sub> and VOC from this air contaminant source since the uncontrolled potential to emit for CO, PM<sub>10</sub> 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 NO<sub>x</sub> emission rate, in lbs/day, as quantified by the CEM/PEM;
    - b. the rolling, 365-day summation of the NO<sub>x</sub> emissions.
  - (2) The permittee 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 measured or 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 NO<sub>x</sub> 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 O<sub>2</sub> level);
    - b. Include the data and information that the owner or operator used to identify the relationship between NO<sub>x</sub> 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).
  - (3) The permittee shall maintain records of the following information for each steam generating unit operating day:
    - a. Calendar date;
    - b. The average hourly NO<sub>x</sub> emission rates (expressed as NO<sub>2</sub>) (ng/J or lb/MMBtu heat input) measured or predicted;
    - c. The 30-day average NO<sub>x</sub> emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

- d. Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under § 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;
  - e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
  - f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
  - g. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;
  - h. Identification of the times when the pollutant concentration exceeded full span of the CEMS (or highest value in the PEMS database if PEMS are employed);
  - i. Description of any modifications to the CEMS (or PEMS) that could affect the ability of the CEMS (or PEMS) to comply with Performance Specification 2 and 3; (or Performance Specification 16 if PEMS are employed) and
  - j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part (or daily sensor evaluations and quarterly Relative Accuracy Audits in the case of PEMS employment).
- (4) Prior to the installation of the continuous NO<sub>x</sub> monitoring (or predictive system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO<sub>x</sub> monitoring system meets the requirements of Performance Specification 2. Once received, the letter/document of certification shall be maintained on-site and 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.
- In lieu of installing a continuous emissions monitoring system (CEM) for NO<sub>x</sub>, the permittee may elect to install a predictive emission monitoring system (PEMS) for the NO<sub>x</sub> emissions. The PEMS must meet 40 CFR Part 60, Appendix B Performance Specification 16. At such time, that a performance specification for PEMS is promulgated, the PEMS shall be required to meet the promulgated requirements.
- (5) The permittee shall operate and maintain equipment to continuously monitor and record NO<sub>x</sub> 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<sub>x</sub> monitoring system including, but not limited to:

- a. emissions of NO<sub>x</sub> in parts per million on an instantaneous (one-minute) basis;
  - b. emissions of NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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) After initial testing to assure the PEMS meets Performance Specification 16, ongoing quality assurance/quality control shall include a relative accuracy test audit (RATA) once every four (or less) calendar quarters. RATA requirements are in addition to any and all PEMS requirements. RATA testing protocol shall be submitted to the Director (the Ohio 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, was evaluated based on the actual materials and the design parameters of the emissions unit(s)' exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to 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., X hours per day and Y 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):

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

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

**Toxic Contaminant:** Acetaldehyde

TLV (mg/m3): 33.2

Maximum Hourly Emission Rate (lbs/hr): 5.75 (permit total)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 108.8

MAGLC (ug/m3): 790

**Toxic Contaminant:** Hexane

TLV (mg/m3): 176.23

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

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.77

MAGLC (ug/m3): 4,196

**Toxic Contaminant:** Formaldehyde

TLV (mg/m3): 368

Maximum Hourly Emission Rate (lbs/hr): 0.52 (permit total)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.48  
MAGLC (ug/m3): 6.47

The permittee, has demonstrated that emissions of acetaldehyde, hexane and formaldehyde, from emissions unit(s) B001, B002, J001, P007, P008, P009, P010 and P012, is 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 FEPTIO 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 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.
  - (2) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect
  - (3) 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.

- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> and/or other associated monitors;
    - iii. a description of any change in the equipment that comprises the continuous emission monitoring (or NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> monitoring or predictive system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime\*\* of the continuous NO<sub>x</sub> 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

- (5) The owner or operator of each affected facility subject to the NO<sub>x</sub> 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 NO<sub>x</sub> 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 O<sub>2</sub> level);
  - b. Include the data and information that the owner or operator used to identify the relationship between NO<sub>x</sub> 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).

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 NO<sub>x</sub>/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 NO<sub>x</sub> 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:

2.1 lbs CO/hr; 9.20 TPY CO

Applicable Compliance Method:

Compliance with the CO emission limitation was demonstrated during an April 21-23, 2009, stack test. 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.

c. Emissions Limitations:

0.27 lb PM<sub>10</sub>/hr; 1.18 TPY PM<sub>10</sub>

Applicable Compliance Method:

The hourly allowable PM<sub>10</sub> emission limitation was developed by multiplying the emission factor of 1.9 lbs of PM<sub>10</sub>/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 PM<sub>10</sub> 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.

Applicable Compliance Method:

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

- g) Miscellaneous Requirements

- (1) None.