



State of Ohio Environmental Protection Agency

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Columbus, OH 43216-1049

5/18/2009

KAREN ADAMS
POET Biorefining - Marion
4615 N LEWIS AVE
Sioux Falls, SD 57104

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0351010207
Permit Number: P0104509
Permit Type: OAC Chapter 3745-31 Modification
County: Marion

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR
Yes	CEMS
No	MACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate 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 comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Marion Star. A copy of the public notice and the draft permit are enclosed. This permit has been posted to the Division of Air Pollution Control Web page <http://www.epa.state.oh.us/dapc> in Microsoft Word and Adobe Acrobat format. 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
122 South Front Street
Columbus, Ohio 43215

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 in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install and operate 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 and Operate 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 W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

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

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install and Operate
POET Biorefining - Marion

Issue Date: 5/18/2009

Permit Number: P0104509

Permit Type: OAC Chapter 3745-31 Modification

Permit Description: Modification to revise the NOx emission limit for emissions units B001 and B002 and establish synthetic minor limitations for NOx emissions. Modification of the OC limitations for emissions unit T002.

Facility ID: 0351010207

Facility Location: POET Biorefining - Marion
Hillman-Ford Road,
Marion, OH 43302

Facility Description: All Other Basic Organic Chemical Manufacturing

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft action of an air pollution control, federally enforceable permit-to-install and operate (PTIO) for the facility at the location identified above on the date indicated. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Donald Waltermeyer at Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Road or (419)352-8461. The permit can be downloaded from the Web page: www.epa.state.oh.us/dapc



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

POET Biorefining – Marion is a 69 million gallon per year fuel ethanol production facility in Marion, Ohio (Marion County). The facility produces fuel ethanol by fermenting corn with subsequent distillation.

3. Facility Emissions and Attainment Status:

The facility is requesting synthetic minor status for Title V and Prevention of Significant Deterioration (PSD) applicability. Putnam County is classified as attainment for all pollutants.

4. Source Emissions:

This permit action effects emissions units B001 and B002 (two 143 mmBtu/hr natural gas fired boilers), PTI 03-17303 issued September 7, 2007. The facility has requested to increase the short-term NOx emission limit from 0.035 lb/mm Btu to the New Source Performance Standard limitation of 0.20 lb/mmBtu and to establish a federally enforceable limitation of 43.84 tons NOx per rolling 365-day period for B001 and B002 combined. The potential NOx emissions without the federally enforceable restriction would exceed 250 tons per year.

5. Conclusion:

As a result of the federally enforceable restriction, the potential emissions for NOx emissions will not exceed PSD and Title V applicability thresholds.

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	43.84
CO	50.20
Filterable PM10	1.18
VOC	0.99



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

DRAFT

Air Pollution Permit-to-Install and Operate
for
POET Biorefining - Marion

Facility ID: 0351010207
Permit Number: P0104509
Permit Type: OAC Chapter 3745-31 Modification
Issued: 5/18/2009
Effective: To be entered upon final issuance
Expiration: To be entered upon final issuance



Air Pollution Permit-to-Install and Operate
for
POET Biorefining - Marion

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State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

Facility ID: 0351010207

Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0351010207

Application Number(s): A0037046

Permit Number: P0104509

Permit Description: Modification to revise the NOx emission limit for emissions units B001 and B002 and establish synthetic minor limitations for NOx emissions. Modification of the OC limitations for emissions unit T002.

Permit Type: OAC Chapter 3745-31 Modification

Permit Fee: \$1,200.00 *DO NOT send payment at this time - subject to change before final issuance*

Issue Date: 5/18/2009

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 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

Chris Korleski
Director



State of Ohio Environmental Protection Agency
 Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

Facility ID: 0351010207

Effective Date: To be entered upon final issuance

Authorization (continued)

Permit Number: P0104509

Permit Description: Modification to revise the NOx emission limit for emissions units B001 and B002 and establish synthetic minor limitations for NOx emissions. Modification of the OC limitations for emissions unit T002.

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

Emissions Unit ID:	B001
Company Equipment ID:	EU027
Superseded Permit Number:	03-17303
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B002
Company Equipment ID:	EU028
Superseded Permit Number:	03-17303
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	T002
Company Equipment ID:	T002
Superseded Permit Number:	03-17303
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

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 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.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

Facility ID: 0351010207

Effective Date: To be entered upon final issuance

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.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

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Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

Facility ID: 0351010207

Effective Date: To be entered upon final issuance

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.



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

Facility ID: 0351010207

Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. T002, Storage tank

Operations, Property and/or Equipment Description:

250,000 gallon storage tank

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. None.

(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. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	Volatile organic compounds (VOC) shall not exceed 0.99 ton per year (TPY).
b.	40 CFR Part 60 Subpart Kb	See b)(2)b. through b)(2)m.
c.	OAC rule 3745-21-09(L)	See b)(2)n.

(2) Additional Terms and Conditions

a. This permit to install and operate (PTIO) takes into account the use of a ventless delivery system for the unloading of gasoline to this storage tank, an internal floating roof and a maximum material throughput of 2,277,000 gallons to control VOC emissions, whenever this air contaminant source is in operation, as a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

b. The fixed roof storage tank shall be equipped with an internal floating roof.

c. The automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports, and the rim vents, if provided, shall



be set to open when the roof is being floated off the roof leg supports or is at the manufacturer's recommended setting.

- d. All openings, except stub drains, shall be equipped with a cover, seal or lid which is to be in a closed position at all times except when in actual use for tank gauging or sampling.
- e. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
- f. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
 - i. A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.
 - ii. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
 - iii. A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
- g. Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
- h. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
- i. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.



- j. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
 - k. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
 - l. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
 - m. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.
 - n. OAC rule 3745-21-09(L) is not applicable because this tank does not store petroleum liquids as defined in OAC rule 3745-21-01 (E)(13).
 - o. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- c) Operational Restrictions
- (1) The permittee shall not exceed an annual material throughput rate of 2,277,00 gallons.
 - (2) The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 11.11 pound per square inch absolute.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall maintain records of the following information:
 - a. The types of petroleum liquids stored in the tank.
 - b. The maximum true vapor pressure (in pounds per square inch absolute), as stored, of each liquid that has a maximum true vapor pressure greater than 11.11 pound per square inch absolute. Available data on the storage temperature may be used to determine the maximum true vapor pressure as in the following:
 - i. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
 - ii. For refined petroleum products the vapor pressure may be obtained by the following:
 - (a) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from



nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Ohio EPA, NWDO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

- (b) (The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.
 - iii. For other liquids, the vapor pressure:
 - (a) May be obtained from standard reference texts, or
 - (b) Determined by ASTM Method D2879-83 (incorporated by reference--see Sec. 60.17); or
 - (c) Measured by an appropriate method approved by the Ohio EPA, NWDO; or
 - (d) Calculated by an appropriate method approved by the Ohio EPA, NWDO.
- (2) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
- (3) For vessels equipped with a liquid-mounted or mechanical shoe primary seal, the permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Ohio EPA, NWDO in the inspection report required in D.3. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
- (4) For vessels equipped with a double-seal system as specified in b)(2)f.ii.:
 - a. The permittee shall visually inspect the vessel as specified in d)(5) at least every 5 years; or
 - b. The permittee shall visually inspect the vessel as specified in d)(3).



- (5) The permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in d)(3) and d)(4)b. and at intervals no greater than 5 years in the case of vessels specified in d)(4)a.
 - (6) The owner or operator shall keep copies of all reports and records required in e)(2), e)(3), and e)(4), for at least 2 years.
 - (7) The permittee shall keep a record of each inspection performed as required by d)(2), d)(3), d)(4), and d)(5). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
 - (8) The owner or operator shall keep copies of all records required by d)(2) through d)(8), for at least 2 years.
 - (9) The owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel (shall be kept for the life of the source).
 - (10) The permittee shall maintain monthly records of the amount of (gallons per month and total gallons, to date for the calendar year) of material throughput for this emissions unit.
- e) Reporting Requirements.
- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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 notify the Ohio EPA, NWDO in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by d)(2) and d)(5) to afford the Ohio EPA, NWDO the opportunity to have an observer present. If the inspection required by d)(5) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Ohio EPA, NWDO at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Ohio EPA, NWDO at least 7 days prior to the refilling.



- (3) The permittee shall furnish the Ohio EPA, NWDO with a report that describes the control equipment and certifies that the control equipment meets the specifications of b)(2)e. through b)(2)m. and d)(2). This report shall be an attachment to the notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
 - (4) If any of the conditions described in d)(3) are detected during the annual visual inspection required by d)(3), a report shall be furnished to the Ohio EPA, NWDO within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
 - (5) After each inspection required by d)(4) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in d)(4)b., a report shall be furnished to the Ohio EPA, NWDO within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of b)(2)e. through b)(2)m. or d)(4) and list each repair made.
 - (6) If the permittee placed, stored, or held in this emissions unit any petroleum liquid with a true vapor pressure which was greater than 11.11 pounds per square inch absolute, the permittee shall notify the Ohio EPA, NWDO within 30 days of becoming aware of the occurrence.
- f) Testing Requirements
- (1) Compliance with the emission limitations in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation:
0.99 TPY of VOC

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual allowable VOC emission limitation by rim seal loss, withdraw loss and deck fitting loss calculations as determined by U.S. EPA Tanks 4.0 program with a maximum annual material throughput of 2,277,000.
- g) Miscellaneous Requirements
- (1) None.



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

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

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. d)(6), d)(7), d)(8), and e)(3)

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

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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 Db (60.40b – 60.49b)	Nitrogen oxides (NOx) emissions shall not exceed 0.20 pounds per million British thermal units (lbs/mmBtu), as a 30-day rolling average. [See b)(2)a. and b)(2)b.]
b.	OAC rule 3745-31-05(D)	NOx emissions shall not exceed 43.84 tons per year (tpy), based upon a rolling, 365-day period for emissions units B001 and B002, combined. [See b)(2)c.]
d.	OAC rule 3745-31-05(A)(3)(a)	Carbon monoxide (CO) emissions shall not exceed 5.72 pounds per hour (lbs/hr) and 25.10 tpy.
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)h.
g.	OAC rule 3745-18-06	See b)(2)i.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
h.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)f.
i.	OAC rule 3745-114-01 ORC 3704.03(F)	See d)(6), d)(7), d)(8), and e)(2)
j.	OAC rule 3745-21-08(B)	See b)(2)i.

(2) Additional Terms and Conditions

- a. The NOx standard shall apply at all times including periods of startup, shutdown, or malfunction.
- b. Each continuous NOx monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. 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), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NOx monitoring 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.

- c. 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. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Emissions of NOx (Tons)
1	4.0
1-2	8.0
1-3	12.0
1-4	16.0
1-5	20.0
1-6	24.0
1-7	28.0



1-8	32.0
1-9	36.0
1-12	43.84

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual emission limitation for NO_x shall be based upon a rolling, 365-day summation of the daily emissions.

- d. Best available technology (BAT) control requirements for this emissions unit has been determined to be:
 - i. the use of low NO_x burners; and
 - ii. the firing of only natural gas.

BAT also includes compliance with the terms and conditions of this permit.

- e. This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).
- f. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled PM₁₀, VOC and SO₂ emissions from this air contaminant source since the potentials to emit (PTE) for PM₁₀, VOC and SO₂ is each less than ten tons per year.

The PTE for VOC from this emissions unit of 3.44 tons/yr was calculated 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], the maximum hourly heat input rate of 143 mmBtu/hr, the maximum operating schedule of 8760 hours per year, then dividing by the natural gas heating value of 1000 Btu/Cf and the conversion factor of 2000 pounds/ton.

The PTE for SO₂ from this emissions unit of 0.38 ton/yr was calculated by multiplying the emission factor of 0.6 lb of SO₂/mm scf [USEPA AP-42 emission factor, Table 1.4-2, Revised 7/98], the maximum hourly heat input rate of 143 mmBtu/hr, the maximum operating schedule of 8760 hours per year, then dividing by the natural gas heating value of 1000 Btu/Cf and the conversion factor of 2000 pounds/ton.

The PTE for filterable PM₁₀ for this emissions unit of 1.18 tons/yr was calculated by multiplying the USEPA, AP-42 emission factor, Table 1.4-2, of 1.9 lbs of PM₁₀/mm scf [USEPA AP-42 emission factor, Table 1.4-2, Revised 7/98], the maximum hourly heat input rate of 143 mmBtu/hr, the maximum operating schedule of 8760 hours per year, then dividing by the natural gas heating value of 1000 Btu/Cf and the conversion factor of 2000 pounds/ton.

- g. All emissions of particulate matter are PM₁₀.
- h. The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)(a).



- i. The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3)(a) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

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. beginning after the first 12 calendar months following the issuance of this permit, the rolling, 365-day summation of the NOx emissions.

Also, during the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative NOx emissions for each calendar month.

- (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 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 40CFR 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_x emission rates (expressed as NO₂) (ng/J or lb/ MMBtu heat input) measured or predicted;
 - c. The 30-day average NO_x 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_x emission rates are in excess of the NO_x 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;
 - i. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and
 - j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.
- (4) Prior to the installation of the continuous NO_x monitoring 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_x 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 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) In lieu of installing a continuous emissions monitoring system (CEM) for NOx, the permittee may elect to install a predictive emission monitoring system (PEMS) for the NOx emissions. The PEMS must meet 'Example Specifications and Test Procedures for Predictive Emission Monitoring Systems' as written by the United States Environmental Protection Agency, and the proposed system shall be approved in writing by Ohio EPA prior to installation. At such time that a performance specification for PEMS is promulgated, the PEMS shall be required to meet the promulgated requirements.

After initial testing to assure the PEMS meets the 'Example Specifications and Test Procedures for Predictive Emission Monitoring Systems', or when available, the promulgated performance specification, 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 manufacturer-suggested quality assurance/quality control procedures. RATA requirements shall include multi-load, multi-fuel (when applicable) testing. RATA testing shall be completed using the appropriate 40 CFR 60, Appendix A test methods (Methods 7E, 3A and 1-4 as necessary). RATA testing protocol shall be submitted to the Director (the Ohio EPA, Central Office) for approval prior to installation of the PEMS.

- (6) The PTIO application for this/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):

Toxic Contaminant: Hexane

TLV (mg/m3): 176.23

Maximum Hourly Emission Rate (lbs/hr): 0.70

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): 0.40

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1.14

MAGLC (ug/m3): 6.47

Toxic Contaminant: Acetaldehyde

TLV (mg/m3): 33.2

Maximum Hourly Emission Rate (lbs/hr): 4.5

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 85.16

MAGLC (ug/m3): 790

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 AToxic Air Contaminant Statute[®], ORC 3704.03(F).

- (7) 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 AToxic 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 AToxic 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

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the AToxic 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 AToxic 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 AToxic 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.

(9) 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.

e) Reporting Requirements

(1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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 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, 12-month emission limitation for NOx; and
- ii. all exceedances of the rolling, 12-month limitation on natural gas usage; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative natural gas usage levels.

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 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.
- (4) The owner or operator of each affected facility subject to the NO_x 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_x 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 NO_x 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) Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio EPA, Northwest District Office
Division of Air Pollution Control
347 N. Dunbridge Rd.
Bowling Green, Ohio 43402



- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring 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 other associated monitors;
 - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS 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 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 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 system, emissions unit, and/or control equipment;



- xii. the date, time, and duration of any downtime** of the continuous NOx monitoring 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 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

f) Testing Requirements

(1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the 0.20 lb/mmBtu emission limitation for NOx and the 5.72 lbs/hr emission limitation for CO.
- c. The following test methods shall be employed to demonstrate compliance with the above emission limitations:
 - i. for NOx, the continuous system for monitoring required by this permit shall be used to determine compliance. For the compliance test, NOx emissions shall be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate shall be used for determining compliance. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period; and
 - ii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

- d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, NWDO.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. The "Intent to Test" notification shall describe in detail the proposed test methods and



procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, NWDO's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, NWDO shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report of the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the test(s).

The emissions testing and written submission of the test results must be completed but no later than 180 days after initial startup of such emissions unit.

- (2) Within 60 days of the effective date of this permit, the permittee shall conduct certification tests of the continuous NOx monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous NOx monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2; and ORC section 3704.03(I).

- (3) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitations:

NOx emissions shall not exceed 0.20 lb NOx/mmBtu; 43.84 tons per year, based upon a rolling 365-day period.

Applicable Compliance Method:

Compliance with the allowable lb NOx/mmBtu emission limitation shall be demonstrated based on the 30-day performance test required in (f)(1).

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



b. Emissions Limitations:

5.72 lbs CO/hr; 25.10 TPY CO

Applicable Compliance Method:

Compliance with the hourly allowable CO emission limitation* shall be demonstrated based on the results of 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 by 0.0005 ton/lb. Therefore, if compliance is shown with the hourly limitation, compliance with the annual limitation shall be assumed.

*Developed by multiplying the emission factor of 0.04 lb of CO/mmBtu (Horizon Ethanol Facility, Jewell Iowa, July 18-19 & 24-26, 2006) by the maximum hourly heat input rate of 143 mmBtu/hr.

c. Emissions Limitations:

0.27 lb filterable PM10/hr; 1.18 TPY filterable 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 be assumed.

d. 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



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Draft Permit-to-Install and Operate

Permit Number: P0104509

Facility ID: 0351010207

Effective Date: To be entered upon final issuance

(1) None.