☒ **Synthetic Minor Determination and/or** ☐ **Netting Determination**

Permit To Install: **03-17304**

A. Source Description

Fostoria Ethanol, LLC is proposing to construct a new 69 million gallon per year fuel ethanol production facility in the town of Fostoria, Ohio (Seneca County). Fostoria Ethanol, LLC will produce fuel ethanol by fermenting corn and subsequently distillation.

B. Facility Emissions and Attainment Status

This is a new facility and is non-major based on synthetic minor restrictions. Fostoria County is classified as attainment for all pollutants. The company is requesting federally enforceable limits to avoid Title V regulations and major New Source Review requirements.

C. Source Emissions

The potential emissions from the proposed installation for NOx, CO and TSP are greater than the Title V and major New Source Review threshold of 100 TPY. The company has requested federally enforceable limits on the emergency generator (Emissions unit P012) to avoid Title V permitting. No single HAP is greater than 10 TPY, total HAPs are less than 25 TPY.

This project will include the installation of the following at the specified PTE:

		NOX	CO	TSP	PM10	SO2	VOC
B001	Boiler #1	21.92	25.10	4.82	4.82	0.40	3.44
B002	Boiler #2	21.92	25.10	4.82	4.82	0.40	3.44
F001	Paved roadways and parking areas			7.70	1.50		
J001	ethanol and gasoline loading operations	1.20	2.90				3.60
P001	grain handling			0.40	0.40		
P002	hammermill#1			9.00	9.00		
P003	hammer mill#2						
P004	hammer mill#3						
P005	hammer mill#4						
P006	hammer mill#5						
P007	ethanol production	48.20	46.0	30.22	30.22	0.40	46.0
P008	dryer #1						
P009	dryer #2						
P010	DDGS cooling and storage			4.80	4.80		21.90
P011	cooling tower			7.00	7.00		
P012	emergency generator	1.40	0.06	0.022	0.022	0.53	0.05
P801	fugitive VOC leaks						8.30
P802	wetcake storage and loadout						(2.2)
P901	grain receiving, transferring, conveying and storage						
	stack emissions			5.40	5.40		
	fugitive			12.3	4.03		
P902	DDGS loadout						
	stack emissions			3.00	3.00		
	fugitive			4.30	1.50		
T001	190 proof ethanol storage tank						0.38
T002	200 proof ethanol storage tank						0.38

T003	denatured ethanol storage tank #1						0.24
T004	denatured ethanol storage tank #2						0.24
T005	denaturant storage tank						0.81
TOTAL	with restriction	94.64	99.16	93.78	76.51	1.73	88.78
	without restriction	216.76	104.35	95.69	77.80	47.95	93.11

D. Conclusion

With the synthetic minor restriction the facility PTE for all pollutants are less than 100 TPY and therefore the facility is not subject to Title V or major New Source Review permitting requirements.

OhioEPA

State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

CERTIFIED MAIL

RE: DRAFT PERMIT TO INSTALL
SENECA COUNTY
Application No: 03-17304
Fac ID: 0374010235

Y	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
	MACT
Db, VV, Kb, IIII	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 7/26/2007

Fostoria Ethanol, LLC
Erin Heupel
2209 East 57th Street
Sioux Falls, SD 57104

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on 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 proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed of final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **$21150** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: **USEPA** **NWDO** **MI**

PUBLIC NOTICE **PUBLIC HEARING**

OHIO ENVIRONMENTAL PROTECTION AGENCY
ISSUANCE OF A DRAFT PERMIT TO INSTALL
Fostoria Ethanol, LLC
State Route 12 and Yokum Road
FOSTORIA, OHIO

Public notice is hereby given that the Ohio EPA - Division of Air Pollution Control (DAPC) has issued, on **July 26, 2007**, a draft Permit to Install (PTI) #03-17304 to Fostoria Ethanol, LLC. The draft PTI involves the proposed installation of air contaminant sources associated with an ethanol production facility.

The ethanol production facility is proposed to be located at State Route 12 and Yokum Road, Fostoria, Ohio (Seneca County).

Copies of the draft PTI are available for review at Ohio EPA's Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio, (419) 352-8461. An Ohio EPA information session and public hearing concerning the draft PTI will be held on September 5, 2007 at Fostoria High School auditorium, 1001 Park Avenue, Fostoria, OH 44830. The information session will begin at 6:30 PM . The public hearing will follow immediately and continue until all persons have had the opportunity to provide testimony related to the proposed permits.

All interested persons are entitled to attend or be represented and give written or oral comments on the draft permits at the hearing. Written comments must be received by Ohio EPA at the close of the business day on September 6, 2007 . Comments received after this date will not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to: Jan Tredway, Division of Air Pollution, Ohio EPA's Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio 43402 or Patti Smith, Division of Surface Water, Central Office, Permits Processing Unit, 50 West Town Street, Suite 700, P.O. Box 1049, Columbus, Ohio 43216-1049.

DRAFT PERMIT TO INSTALL 03-17304

Application Number: 03-17304

Facility ID: 0374010235

Permit Fee: **To be entered upon final issuance**

Name of Facility: Fostoria Ethanol, LLC

Person to Contact: Erin Heupel

Address: 2209 East 57th Street
Sioux Falls, SD 57104

Location of proposed air contaminant source(s) [emissions unit(s)]:
State Route 12 and Yokum Road
Fostoria, Ohio

Description of proposed emissions unit(s):
69 mmgal/year ethanol manufacturing plant.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections,

conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental

Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
NOx	94.64
CO	99.16
TSP	93.78
PM10	76.51
SO2	1.73
VOC	88.78

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (B001) - 143 mmBtu/hr natural gas fired boiler

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of 40 CFR Part 60 Subpart Db and OAC rules 3745-17-07(A)(1) and 3745-17-10(B). Nitrogen oxides (NOx) emissions shall not exceed 0.035 pound per million British thermal units (lbs/mmBtu) of actual heat input and 21.92 tons per year (TPY). Carbon monoxide (CO) emissions shall not exceed 5.72 pounds per hour (lbs/hr) and 25.10 TPY. See section A.2.a.
ORC 3704.03(T)(4)	See section A.2.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.
OAC rule 3745-17-10(B)(1)	0.020 lb PE/mmBtu of heat input
40 CFR Part 60, Subpart Db	See sections A.2..g and A.2.d.
OAC rule 3745-21-08(B)	See section A.2.c.
OAC rule 3745-18-06	See A.2.b.
OAC rule 3745-114-01 ORC 3704.03(F)	See section C.6.

2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit has been determined to be:

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i. the use of low NO_X burners; and
ii. firing of only natural gas.

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

2.b This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).

2.c 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) 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.

2.d Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NOx monitoring system, designed to ensure continuous valid and representative readings of NOx emissions 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.

2.e Pursuant to ORC 3704.03(T)(4), the Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply the PE, VOC and SO2 emissions from this air contaminant source since the potentials to emit (PTE) for PE, VOC and SO2 is each less than ten tons per year.

The PTE for PE from this emissions unit of 4.82 tons/yr was calculated by multiplying the emission factor of 7.6 lbs of PE 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, by the heating value of Cf/1000 Btu, by the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

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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] by the maximum hourly heat input rate of 143 mmBtu/hr, by the heating value of Cf/1000 Btu, by the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

The PTE for SO2 from this emissions unit of 0.40 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) by the maximum hourly heat input rate of 143 mmBtu/hr, by the heating value of Cf/1000 Btu, by the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

2.f All emissions of particulate matter are PM10.

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

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

1. Pursuant to 40 CFR Part 60, Subpart Db, the permittee shall record and maintain records of the amount of natural gas combusted during each day. These records shall be maintained by the permittee for a period of two years following the date of such record.

2. 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.

3. Prior to the installation of the continuous NOx 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 Specifications 2 for approval by the Ohio EPA, Central Office. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NOx 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.

   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.

4. The permittee shall install, operate, and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of the applicable standard(s). The

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continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60.

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

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

b. emissions of NOx in pounds per hour and 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 NOx 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 NOx 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 NOx 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).

5. The permittee shall operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of NOx, in pounds per hour. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.

6. The permit to install for Emission Units B001, B002, J001, P007, P008, P009, P010 and P012 was evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved

model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Hexane
TLV (mg/m^3): 176.23
Maximum Hourly Emission Rate (lbs/hr): 0.30
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.97
MAGLC (ug/m^3): 4,196

Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. These reports shall be submitted to Ohio EPA, Northwest District Office (NWDO) within 30 days after the deviation occurs.

2. 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 Environmental Protection Agency
   DAPC - PIDM
   50 West Town Street, Suite 700
   P. O. Box 1049
   Columbus, Ohio 43216-1049

   and

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

3. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx 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

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Office or local air agency, documenting all instances of NOx emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 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). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

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 NOx and other associated monitors;

iii. the location of the continuous NOx monitor;

iv. the exceedance report as detailed in (a) above;

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

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

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

viii. results and date of quarterly cylinder gas audits;

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

x. the results of any relative accuracy test audit showing the continuous NOx 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 NOx 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 (b)(xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

E. 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 0.035 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, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A; 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 permittee may

request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Within 60 days after achieving maximum production rate but no later than 180 days after startup of the specified emissions unit, 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 6; and ORC section 3704.03(I).

   Personnel from the Ohio EPA Central Office and the Ohio EPA Central District Office 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 Ohio EPA Central District Office 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 6; and ORC section 3704.03(I). The letter/document of certification of the continuous NOx monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Ohio EPA, Central District Office upon request.

   Ongoing compliance with the NOx emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping 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.

3. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. <u>Emissions Limitations:</u>
   0.035 lb NOx/mmBtu; 21.92 TPY NO_X

   <u>Applicable Compliance Method:</u>
   Compliance with the allowable lb NOx/mmBtu emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1 - 4 and 7 of 40 CFR Part 60, Appendix A.

   The annual emission limitation was developed by multiplying the lb NOx/mmBtu limitation by the maximum heat input rate of 143 mmBtu/hr and then by the maximum operating schedule of 8760 hours/year, and then by 0.0005 ton/lb. Therefore, if compliance is shown with the lb NOx/mmBtu limitation, compliance with the annual limitation shall be assumed.

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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:
1.10 lb PM10/hr; 4.82 TPY PM10

Applicable Compliance Method:
The hourly allowable PM10 emission limitation was developed by multiplying the emission factor of 7.6 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 and 202. 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).

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e. Emissions Limitations: 0.020 lb PE/mmBtu of heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lb PE/mmBtu allowable limitation by dividing the USEPA, AP-42 emission factor of 1.9 lbs PE (filtrable)/mm scf (Table 1.4-2, revised 7/98) by the heating value of natural gas of 1000 mm scf/mmBtu.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (B001) - 143 mmBtu/hr natural gas fired boiler

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of 40 CFR Part 60 Subpart Db and OAC rules 3745-17-07(A)(1) and 3745-17-10(B). Nitrogen oxides (NOx) emissions shall not exceed 0.035 pound per million British thermal units (lbs/mmBtu) of actual heat input and 21.92 tons per year (TPY). Carbon monoxide (CO) emissions shall not exceed 5.72 pounds per hour (lbs/hr) and 25.10 TPY. See section A.2.a.
ORC 3704.03(T)(4)	See section A.2.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.
OAC rule 3745-17-10(B)(1)	0.020 lb PE/mmBtu of heat input
40 CFR Part 60, Subpart Db	See sections A.2..g and A.2.d.
OAC rule 3745-21-08(B)	See section A.2.c.
OAC rule 3745-18-06	See A.2.b.
OAC rule 3745-114-01 ORC 3704.03(F)	See section C.6.

2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit has been determined to be:

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i. the use of low NO_X burners; and
ii. firing of only natural gas.

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

2.b This emissions unit is exempt from the requirements of OAC rule 3745-18-06 in accordance with OAC rule 3745-18-06(A).

2.c 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) 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.

2.d Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NOx monitoring system, designed to ensure continuous valid and representative readings of NOx emissions 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.

2.e Pursuant to ORC 3704.03(T)(4), the Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply the PE, VOC and SO2 emissions from this air contaminant source since the potentials to emit (PTE) for PE, VOC and SO2 is each less than ten tons per year.

The PTE for PE from this emissions unit of 4.82 tons/yr was calculated by multiplying the emission factor of 7.6 lbs of PE 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, by the heating value of Cf/1000 Btu, by the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

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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] by the maximum hourly heat input rate of 143 mmBtu/hr, by the heating value of Cf/1000 Btu, by the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

The PTE for SO2 from this emissions unit of 0.40 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) by the maximum hourly heat input rate of 143 mmBtu/hr, by the heating value of Cf/1000 Btu, by the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

2.f All emissions of particulate matter are PM10.

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

B. Operational Restrictions

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

C. Monitoring and/or Recordkeeping Requirements

1. Pursuant to 40 CFR Part 60, Subpart Db, the permittee shall record and maintain records of the amount of natural gas combusted during each day. These records shall be maintained by the permittee for a period of two years following the date of such record.

2. 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.

3. Prior to the installation of the continuous NOx 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 Specifications 2 for approval by the Ohio EPA, Central Office. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NOx 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.

   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.

4. The permittee shall install, operate, and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of the applicable standard(s). The

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continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60.

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

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

b. emissions of NOx in pounds per hour and 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 NOx 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 NOx 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 NOx 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).

5. The permittee shall operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of NOx, in pounds per hour. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.

6. The permit to install for Emission Units B001, B002, J001, P007, P008, P009, P010 and P012 was evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved

model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Hexane
TLV (mg/m^3): 176.23
Maximum Hourly Emission Rate (lbs/hr): 0.30
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.97
MAGLC (ug/m^3): 4,196

Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

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a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. These reports shall be submitted to Ohio EPA, Northwest District Office (NWDO) within 30 days after the deviation occurs.

2. 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 Environmental Protection Agency
   DAPC - PIDM
   50 West Town Street, Suite 700
   P. O. Box 1049
   Columbus, Ohio 43216-1049

   and

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

3. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx 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

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Office or local air agency, documenting all instances of NOx emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 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). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

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 NOx and other associated monitors;

iii. the location of the continuous NOx monitor;

iv. the exceedance report as detailed in (a) above;

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

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

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

viii. results and date of quarterly cylinder gas audits;

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

x. the results of any relative accuracy test audit showing the continuous NOx 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 NOx 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 (b)(xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

E. 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 0.035 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, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A; 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 permittee may

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request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Within 60 days after achieving maximum production rate but no later than 180 days after startup of the specified emissions unit, 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 6; and ORC section 3704.03(I).

   Personnel from the Ohio EPA Central Office and the Ohio EPA Central District Office 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 Ohio EPA Central District Office 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 6; and ORC section 3704.03(I). The letter/document of certification of the continuous NOx monitoring system, issued by the Ohio EPA, shall be maintained on file upon receipt and made available to the Ohio EPA, Central District Office upon request.

   Ongoing compliance with the NOx emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping 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.

3. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. <u>Emissions Limitations:</u>
   0.035 lb NOx/mmBtu; 21.92 TPY NO_X

   <u>Applicable Compliance Method:</u>
   Compliance with the allowable lb NOx/mmBtu emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1 - 4 and 7 of 40 CFR Part 60, Appendix A.

   The annual emission limitation was developed by multiplying the lb NOx/mmBtu limitation by the maximum heat input rate of 143 mmBtu/hr and then by the maximum operating schedule of 8760 hours/year, and then by 0.0005 ton/lb. Therefore, if compliance is shown with the lb NOx/mmBtu limitation, compliance with the annual limitation shall be assumed.

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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:
1.10 lb PM10/hr; 4.82 TPY PM10

Applicable Compliance Method:
The hourly allowable PM10 emission limitation was developed by multiplying the emission factor of 7.6 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 and 202. 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).

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e. Emissions Limitations: 0.020 lb PE/mmBtu of heat input

Applicable Compliance Method:

The permittee shall demonstrate compliance with the lb PE/mmBtu allowable limitation by dividing the USEPA, AP-42 emission factor of 1.9 lbs PE (filtrable)/mm scf (Table 1.4-2, revised 7/98) by the heating value of natural gas of 1000 mm scf/mmBtu.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (F001) - plant roadways and parking areas

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
ORC 3704.03(T)(4)	See section A.2.a.
OAC rule 3745-17-07(B)	See section A.2.b.
OAC rule 3745-17-08(B)	See section A.2.c.

2. Additional Terms and Conditions

2.a Pursuant to ORC 3704.03(T)(4), the Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and particulate matter equal to or less than 10 microns in size (PM10) emissions from this air contaminant source since the potentials to emit (PTE) for PE and PM10 is each less than ten tons per year.

The PTEs for PM10 and PE are 1.5*, and 7.7* tons, respectively.

*Based upon the calculations in USEPA, AP-42, Section 13.2.1.3.

2.b This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).

2.c This emissions unit is not located within an “Appendix A” area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

B. Operational Restrictions

None.

C. Monitoring and/or Recordkeeping Requirements

None.

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D. Reporting Requirements

None.

E. Testing Requirements

None.

F. Miscellaneous Requirements

None.

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment -(J001) - ethanol loading operations

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile compound (VOC) emissions shall not exceed 3.60 tons/yr. See section A.2.a.
ORC 3704.03(T)(4)	See section A.2.b.
OAC rule 3745-21-07(E)	See sections A.2.c through A.2.g.
OAC rule 3745-21-08(B)	See section A.2.h.
OCR 3704.03(F) OAC rule 3745-114-01	See section C.4.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a flare system, whenever this air contaminant source is in operation, with a minimum control efficiency of 98%, by weight for VOC, 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).

2.b Pursuant to ORC 3704.03(T)(4), BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the carbon monoxide (CO) and nitrogen oxides (NOx) emissions from this air contaminant source since the potentials to emit (PTE) for CO and NOx is each less than ten tons per year.

The PTE for CO of 2.90 tons/yr was calculated by multiplying the manufacturer's guaranteed emission rate of 0.084 lb CO per 1000 gallons by the maximum annual ethanol throughput rate of 69 million gallons and applying the conversion factor of 1 ton per 2000 lbs.

The PTE for NOx of 1.20 tons/yr was calculated by multiplying the manufacturer's guaranteed emission rate of 0.0334 lb NOx per 1000 gallons by the maximum

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annual ethanol throughput rate of 69 million gallons and applying the conversion factor of 1 ton per 2000 lbs.

2.c All emissions from the loading rack shall be collected and combusted in a flare with a minimum 98% design VOC control efficiency.

2.d During any transfer of material through the loading rack, the vapors displaced from the delivery vessel shall be collected and vented to the flare.

2.e A means shall be provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.

2.f The loading rack shall utilize top submerged filling or bottom filling for the transfer of materials.

2.g All material loading lines, unloading lines and vapor lines shall be equipped with fittings which are vapor tight.

2.h The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B).

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 U.S. EPA approves the revision to OAC rule 3745-21-08, the requirements to satisfy "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

1. The maximum annual ethanol throughput rate for this emissions unit shall not exceed 69 million gallons.

2. The permittee shall comply with the following restrictions on the flare controlling this emissions unit:

   a. the closed vent system shall be operated at all times when emissions may be vented to it;

   b. the flare shall be operated with a pilot flame . The pilot flame shall be present at all times the ethanol loading system is in operation and shall be monitored with a thermocouple or any other equivalent device to detect the presence of the pilot flame;

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c. the net heating value of the gas being combusted in the flare, as determined by the method specified in paragraph (P)(2) of rule 3745-21-10 of the Administrative Code, shall be 300 Btu/scf or greater;

d. the flare shall be designed and operated with an actual exit velocity, as determined by the method specified in paragraph (P)(3) of rule 3745-21-10 of the Administrative Code, less than 60 feet per second; and,

e. the permittee shall ensure the flare is operated and maintained in conformance with its design.

C. Monitoring and/or Record keeping Requirements

1. The permittee shall properly install, operate, and maintain a device to continuously monitor the pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall comply with the following monitoring and record keeping requirements on the flare controlling this emissions unit:

   a. the flare shall be monitored with a thermocouple or any other equivalent device to detect the presence of a pilot flame;

   b. the permittee shall maintain and operate a flow indicator which provides a record of the vent stream flow to the flare;

   c. the permittee shall maintain records of the following:

      i. flow rate to the flare, including records of all periods when the closed vent stream is diverted from the flare or when there is no flow rate;

      ii. records of all periods when the flare pilot flame is absent;

      iii. periods when the closed vent system and flare are not operated as designed; and

      iv. dates of start-ups and shutdowns of the closed vent system and flare; and

   d. the permittee shall collect and record a daily log or record of operating time for the closed vent system, flare and monitoring equipment.

2. The permittee shall maintain monthly records of the amount of product throughput (in gallons per month and total gallons, to date for the calendar year) for each type of product.

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3. The permittee shall record each time loading occurs and document when submerged or bottom loading is used.

4. The permit to install for Emission Units B001, B002, J001, P007, P008, P009, P010 and P012 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Hexane
   TLV (mg/m^3): 176.23
   Maximum Hourly Emission Rate (lbs/hr): 0.04
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.97
   MAGLC (ug/m^3): 4,196

   Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

   If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC

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rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods during which the pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period.

2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of any of the following requirements for the flare:

   a. all monitored parameters (i.e., thermocouple or equivalent device and vent stream flow indicator);

   b. periods of time when the closed vent system stream is diverted from system control devices;

   c. all periods of time when the flare was not operational, including all periods of time during which the pilot flame on the flare is not functioning properly; and

   d. all periods of time when required monitoring data was not collected.

3. These quarter deviation reports shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

4. The permittee shall submit annual reports that summarize the total annual ethanol throughput, in gallons, for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. 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 VOC control efficiency for the flare controlling this emissions unit.

   c. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for total VOC emissions .

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

   d. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

   e. 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.

   f. 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations specified in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following method(s):

   a. Emission Limitation : VOC emissions shall not exceed 3.60 tons/yr.

      Applicable Compliance Method: The annual limitation represents the potential to emit for this emissions unit. The PTE for VOC for this emissions unit was calculated by multiplying an emission factor of 5.14 lbs VOC/1000 gallons of ethanol [as determined through the methodology in AP-42, section 5.2.2 (1/95) in conjunction with the information submitted by the permittee in PTI application #03-17303] by the maximum annual throughout of 69 million gallons, and by a control factor of (1-0.98*), and then dividing by 2000 pounds/ton.

      * the control efficiency for the flare is assumed to be a minimum of 98%.

F. Miscellaneous Requirements

1. If required, compliance with the net heating value of the gas being combusted in the flare (shall be 300 BTU/SCF or greater) shall be determined by the method specified in Paragraph (P)(2) of OAC rule 3745-21-10.

2. If required, compliance with the designed and operated actual exit velocity of the flare (shall be less than 60 feed per second) shall be determined by the method specified in Paragraph (P)(3) of OAC rule 3745-21-10.

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P001) - grain transfer conveyors, scalper and surge bins

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.004 grain per dry standard cubic foot (gr/dscf) and 0.40 ton per year (TPY). Visible particulate emissions (PE) from the baghouse stack(s) shall not exceed 0% opacity, as a six-minute average. See sections A.2.a and A.2.e.
OAC rule 3745-17-11(B)	See section A.2.b.
OAC rule 3745-17-07(A)	See section A.2.c.
40 CFR Part 60 Subpart DD	See section A.2.d.

2. Additional Terms and Conditions

2.a The permit to install (PTI) takes into account the use of a baghouse system (with a 100% capture efficiency and a maximum outlet grain loading of 0.004 gr PM10/dscf) to control PM10 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).

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

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

2.d 40 CFR Part 60, Subpart DD (Standards of Performance for Grain Elevators), is applicable to grain storage elevators at any wheat flour mill, wet corn mill, dry corn

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mill (human consumption), rice mill, or soybean oil extraction plant with a permanent grain storage capacity greater than 1.0 million U.S. bushels. The permanent grain storage capacity of this facility is 3.0 million bushels, but the facility is classified as a dry corn chemical manufacturing (not for human consumption). Therefore, 40 CFR Part 60, Subpart DD, is not applicable.

2.e All emissions of particulate matter are PM10.

B. Operational Restrictions

1. The permittee shall operate the baghouse at all times when this emissions unit is in operation.

C. Monitoring and/or Record keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. the total duration of any visible emission incident; and

   c. any corrective actions taken to eliminate the visible emissions.

2. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stack(s) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions from the baghouse stack(s). These reports shall be submitted to the Ohio EPA, NWDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

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E. 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 baghouse grain loading of 0.004 gr PM10/dscf.

   c. The following test methods shall be employed to demonstrate compliance with the above emissions limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202 and 40 CFR Part 60, Appendix A, Methods 1-4 (for volumetric air flow rate). 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations specified in Section A.1 of the terms and conditions of this permit shall be determined in accordance with the following method(s):

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a. Emission Limitation:
The baghouse shall achieve a maximum outlet concentration of not greater than 0.004 gr PM10/dscf of exhaust gas.

Applicable Compliance Method:
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

b. Emission Limitation:
0.40 ton PM10/yr

Applicable Compliance Method:
Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (2,500 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

c. Emission Limitation:
Visible PE from the baghouse stack(s) shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:
Compliance with the visible emission limitation shall be demonstrated in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

F. Miscellaneous Requirements

None.

C:\temp\permits3\7181.wpd

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P002) - hammermill no. 1

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P004, P005 and P006, combined, shall not exceed 0.004 grain per dry standard cubic foot (gr/dscf) and 9.0 tons per year (TPY). Visible particulate emissions (PE) from the baghouse stack(s) shall not exceed 0% opacity, as a six-minute average. See section A.2.a and A.2.b.
OAC rule 3745-17-07(A)	See section A.2.c.
OAC rule 3745-17-11(B)	See section A.2.c.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system (with a 100% capture efficiency and a maximum outlet grain loading of 0.004 gr PM10/dscf) to control PM10 emissions, from P002, P003, P004, P005 and P006, combined, whenever these air contaminant source are 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).

2.b All emissions of particulate matter are PM10.

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

B. Operational Restrictions

1. The permittee shall operate the baghouse at all times when this emissions unit is in operation.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. the total duration of any visible emission incident; and

   c. any corrective actions taken to eliminate the visible emissions.

2. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA district or local field office by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing on the baghouse controlling the following emissions units: P002, P003, P004, P005 and P006, 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(s) will be operated, but not later than 180 days after initial start-up of one of the five hammer mills.

   b. The emission testing shall be conducted to demonstrate compliance with the baghouse grain loading of 0.004 gr PM10/dscf.

   c. The following test methods shall be employed to demonstrate compliance with the above emission limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202 and 40 CFR Part 60, Appendix A, Methods 1-4 (for volumetric air flow

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rate). 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
The baghouse shall achieve a maximum outlet concentration of not greater than 0.004 gr PM10/dscf of exhaust gas.

Applicable Compliance Method:
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

b. Emission Limitations:
9.0 tons PE/year

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Applicable Compliance Method:
Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (60,000 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

c. Emission Limitation:
Visible PE from the baghouse stack shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P003) - hammermill no. 2

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P004, P005 and P006, combined, shall not exceed 0.004 grain per dry standard cubic foot (gr/dscf) and 9.0 tons per year (TPY). Visible particulate emissions (PE) from the bag house stack(s) shall not exceed 0% opacity, as a six-minute average. See section A.2.a and A.2.b.
OAC rule 3745-17-07(A)	See section A.2.c.
OAC rule 3745-17-11(B)	See section A.2.c.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system (with a 100% capture efficiency and a maximum outlet grain loading of 0.004 gr PM10/dscf) to control PM10 emissions, from P002, P003, P004, P005 and P006, combined, whenever these air contaminant source are 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).

2.b All emissions of particulate matter are PM10.

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

B. Operational Restrictions

1. The permittee shall operate the baghouse at all times when this emissions unit is in operation.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. the total duration of any visible emission incident; and

   c. any corrective actions taken to eliminate the visible emissions.

2. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA district or local field office by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing on the baghouse controlling the following emissions units: P002, P003, P004, P005 and P006, 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(s) will be operated, but not later than 180 days after initial start-up of one of the five hammer mills.

   b. The emission testing shall be conducted to demonstrate compliance with the baghouse grain loading of 0.004 gr PM10/dscf.

   c. The following test methods shall be employed to demonstrate compliance with the above emission limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202 and 40 CFR Part 60, Appendix A, Methods 1-4 (for volumetric air flow

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rate). 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
The baghouse shall achieve a maximum outlet concentration of not greater than 0.004 gr PM10/dscf of exhaust gas.

Applicable Compliance Method:
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

b. Emission Limitations:
9.0 tons PE/year

Applicable Compliance Method:
Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (60,000 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

c. Emission Limitation:
Visible PE from the baghouse stack shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P004) - hammermill no. 3

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P004, P005 and P006, combined, shall not exceed 0.004 grain per dry standard cubic foot (gr/dscf) and 9.0 tons per year (TPY). Visible particulate emissions (PE) from the bag house stack(s) shall not exceed 0% opacity, as a six-minute average. See section A.2.a and A.2.b.
OAC rule 3745-17-07(A)	See section A.2.c.
OAC rule 3745-17-11(B)	See section A.2.c.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system (with a 100% capture efficiency and a maximum outlet grain loading of 0.004 gr PM10/dscf) to control PM10 emissions, from P002, P003, P004, P005 and P006, combined, whenever these air contaminant source are 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).

2.b All emissions of particulate matter are PM10.

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

B. Operational Restrictions

1. The permittee shall operate the baghouse at all times when this emissions unit is in operation.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. the total duration of any visible emission incident; and

   c. any corrective actions taken to eliminate the visible emissions.

2. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA district or local field office by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing on the baghouse controlling the following emissions units: P002, P003, P004, P005 and P006, 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(s) will be operated, but not later than 180 days after initial start-up of one of the five hammer mills.

   b. The emission testing shall be conducted to demonstrate compliance with the baghouse grain loading of 0.004 gr PM10/dscf.

   c. The following test methods shall be employed to demonstrate compliance with the above emission limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202 and 40 CFR Part 60, Appendix A, Methods 1-4 (for volumetric air flow

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rate). 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>
The baghouse shall achieve a maximum outlet concentration of not greater than 0.004 gr PM10/dscf of exhaust gas.

<u>Applicable Compliance Method:</u>
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

b. <u>Emission Limitations:</u>
9.0 tons PE/year

Applicable Compliance Method:
Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (60,000 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

c. Emission Limitation:
Visible PE from the baghouse stack shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P005) - hammermill no. 4

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P004, P005 and P006, combined, shall not exceed 0.004 grain per dry standard cubic foot (gr/dscf) and 9.0 tons per year (TPY). Visible particulate emissions (PE) from the bag house stack(s) shall not exceed 0% opacity, as a six-minute average. See section A.2.a and A.2.b.
OAC rule 3745-17-07(A)	See section A.2.c.
OAC rule 3745-17-11(B)	See section A.2.c.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system (with a 100% capture efficiency and a maximum outlet grain loading of 0.004 gr PM10/dscf) to control PM10 emissions, from P002, P003, P004, P005 and P006, combined, whenever these air contaminant source are 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).

2.b All emissions of particulate matter are PM10.

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

B. Operational Restrictions

1. The permittee shall operate the baghouse at all times when this emissions unit is in operation.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. the total duration of any visible emission incident; and

   c. any corrective actions taken to eliminate the visible emissions.

2. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA district or local field office by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing on the baghouse controlling the following emissions units: P002, P003, P004, P005 and P006, 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(s) will be operated, but not later than 180 days after initial start-up of one of the five hammer mills.

   b. The emission testing shall be conducted to demonstrate compliance with the baghouse grain loading of 0.004 gr PM10/dscf.

   c. The following test methods shall be employed to demonstrate compliance with the above emission limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202 and 40 CFR Part 60, Appendix A, Methods 1-4 (for volumetric air flow

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rate). 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
The baghouse shall achieve a maximum outlet concentration of not greater than 0.004 gr PM10/dscf of exhaust gas.

Applicable Compliance Method:
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

b. Emission Limitations:
9.0 tons PE/year

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Applicable Compliance Method:
Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (60,000 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

c. Emission Limitation:
Visible PE from the baghouse stack shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P006) - hammermill no. 5

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P002, P003, P004, P005 and P006, combined, shall not exceed 0.004 grain per dry standard cubic foot (gr/dscf) and 9.0 tons per year (TPY). Visible particulate emissions (PE) from the bag house stack(s) shall not exceed 0% opacity, as a six-minute average. See section A.2.a and A.2.b.
OAC rule 3745-17-07(A)	See section A.2.c.
OAC rule 3745-17-11(B)	See section A.2.c.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system (with a 100% capture efficiency and a maximum outlet grain loading of 0.004 gr PM10/dscf) to control PM10 emissions, from P002, P003, P004, P005 and P006, combined, whenever these air contaminant source are 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).

2.b All emissions of particulate matter are PM10.

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

B. Operational Restrictions

1. The permittee shall operate the baghouse at all times when this emissions unit is in operation.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. the total duration of any visible emission incident; and

   c. any corrective actions taken to eliminate the visible emissions.

2. The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the appropriate Ohio EPA district or local field office by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing on the baghouse controlling the following emissions units: P002, P003, P004, P005 and P006, 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(s) will be operated, but not later than 180 days after initial start-up of one of the five hammer mills.

   b. The emission testing shall be conducted to demonstrate compliance with the baghouse grain loading of 0.004 gr PM10/dscf.

   c. The following test methods shall be employed to demonstrate compliance with the above emission limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202 and 40 CFR Part 60, Appendix A, Methods 1-4 (for volumetric air flow

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rate). 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>
The baghouse shall achieve a maximum outlet concentration of not greater than 0.004 gr PM10/dscf of exhaust gas.

<u>Applicable Compliance Method:</u>
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

b. <u>Emission Limitations:</u>
9.0 tons PE/year

Applicable Compliance Method:
Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (60,000 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

c. Emission Limitation:
Visible PE from the baghouse stack shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P007) - ethanol production operations

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart VV and OAC rule 3745-21-09(DD). See section A.2.a. <u>Emission limits during normal operation:</u> Nitrogen oxides (NOx) emissions from emissions units P007, P008 and P009, combined, shall not exceed 11.0 pounds per hour (lbs/hr) and 48.20 tons per year (TPY). Carbon monoxide (CO) emissions from P007, P008 and P009, combined, shall not exceed 10.50 lbs/hr and 46.0 TPY. Particulate matter equal to or less than 10 microns in size (PM10), from emissions units P007, P008 and P009, combined, shall not exceed 6.90 lbs/hr and 30.22 TPY (see section A.2.c). Volatile organic compound (VOC) emissions from P007, P008 and P009, combined, shall not exceed 10.50 lbs/hr and 46.0 TPY.
OAC rule 3745-31-05(A)(3)	<u>Emission limits during downtime of the RTO:</u> During downtime of the RTO, emissions unit P007 shall be the only emissions unit exhausted to the fermentation scrubber. VOC emissions shall not exceed 30.80 lbs/hr and 7.70 TPY (see A.2.c). Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

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Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
ORC 3704.03(T)(4)	See section A.2.e.
OAC rule 3745-21-09(DD)	See the requirements for emissions unit P801.
40 CFR Part 60, Subpart VV	See the requirements for emissions unit P801.
OAC rule 3745-17-07(A)	See section A.2.f.
OAC rule 3745-17-11(B)	See section A.2.f.
OAC rule 3745-21-08(B)	See section A.2.g.
OAC rule 3745-114-01 ORC 3704.03(T)(4)	See section C.5.

2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit has been determined to be use of the following:

i. a wet scrubber. The wet scrubber shall meet a minimum control efficiency of 95% for VOC emissions;

ii. a regenerative thermal oxidizer (RTO) following the wet scrubber. The regenerative thermal oxidizer shall meet a minimum control efficiency of 90% for CO and PE* and 98% for VOC emissions; and

iii. firing only natural gas and the use of low NOx burners in the RTO.

*The control of PE includes a multiclone/cyclone for removal of PE (as dried product) prior to entering the RTO. The control system shall result in a PM10 mass emission rate not to exceed 6.90 lbs/hr from the RTO.

2.b The annual allowable emission rate is based on the annual production of 69,000,000 gallons denatured ethanol. Since the facility annual production rate is equivalent to the maximum facility capacity, no operational restrictions, monitoring, record keeping or reporting requirements are necessary to ensure that this emissions unit does not exceed its annual allowable emission rates. The requirement to record the amount of ethanol produced is in the terms and conditions of emissions unit J001.

2.c When the RTO is shutdown for unscheduled maintenance* or other operational reasons, while this emissions unit is in operation, this emissions unit shall be controlled by the fermentation scrubber. Down time of the RTO, while this emissions unit continues to operate, shall not exceed 500 hours per year and the permittee must also shut down emissions units P008 and P009 during the unscheduled downtime of the RTO.

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*RTO shutdown for unscheduled maintenance is considered any maintenance, malfunction, etc. which the permittee does not address under the provisions of OAC rule 3745-15-06.

2.d All emissions of particulate matter are PM10.

2.e This emissions unit's potential to emit for SO2* is less than 10 tons per year. Therefore, pursuant to ORC 3704.03(T)(4), OAC rule 3745-31-05(A)(3) is not applicable.

*The potential to emit for SO2 of 0.40 ton/yr (for emissions units P007, P008 and P009, combined) was calculated by multiplying the emission factor of 0.6 pound of SO2/mm scf (USEPA, AP-42 emission factor, Table 1.4-2, revised 7/98) by the maximum hourly heat input rate of 150 mmBtu/hr, a heating value of cf/1000 Btu, the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

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

2.g 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) 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.

B. Operational Restrictions

1. The unscheduled down time of the RTO, while this emissions unit continues to operate, shall not exceed 500 hours per calendar year.

2. The permittee shall shut down emissions unit P008 and P009 when the RTO experiences an unscheduled shutdown.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the combustion temperature within the thermal oxidizer during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s). The permittee shall record the combustion temperature within the thermal oxidizer on a continuous basis.

   Whenever the monitored value for the combustion temperature deviates from the value specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

   In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the combustion temperature within the thermal oxidizer immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

   The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

   This value is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency.

2. The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber, in inches of water, and the scrubber water flow rate, in gallons per minute during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop, in inches of water, across the scrubber and the scrubber water flow rate, in gallons per minute, on a once per shift basis.

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Whenever the monitored value for the pressure drop and/or the monitor value for the water flow rate deviates from the value specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the pressure drop and/or water flow rate reading immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The pressure drop across the scrubber shall be maintained within the range established during the most recent emission testing that demonstrated the emissions unit was in compliance (until such time that such range is established, the pressure drop across the scrubber shall be maintained in accordance with the manufacturer's specifications). The scrubber water flow rate shall be no less the value established during the most recent emission testing that demonstrated the emissions unit was in compliance (until such time that such value is established, the scrubber water flow rate shall be maintained in accordance with the manufacturer's specifications).

The pressure drop range and water flow rate are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the range and/or water flow rate based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rates for this emissions unit. In addition, approved revisions to the pressure drop range and/or water flow rate value will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into the operating permit for the facility by means of a permit modification.

3. For each time period during which emissions units P008 and/or P009 were in operation when the RTO was shut down (see A.2.c and B.2), the permittee shall maintain a record of the number of hours emissions unit P008 and/or P009 were in operation during that time period. Also, the permittee shall maintain a record of all instances when emissions unit P008 and/or P009 were in operation when the RTO was shut down.

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4. The permittee shall maintain monthly records of the number of hours the RTO was shutdown while this emissions unit remained in operation [see A.2.c and B.2] (in hours per month and total hours, to date for the calendar year).

5. The permit to install for emission units B001, B002, J001, P007, P008, P009, P010 and P012 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Acetaldehyde
   TLV (mg/m^3): 33.2
   Maximum Hourly Emission Rate (lbs/hr): 2.90 (emission rate when RTO is down)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 57.46
   MAGLC (ug/m^3): 790

   Pollutant: Hexane
   TLV (mg/m^3): 176.23
   Maximum Hourly Emission Rate (lbs/hr): 0.10
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.97
   MAGLC (ug/m^3): 4,196

   Pollutant: formaldehyde
   TLV (mg/m^3): 368
   Maximum Hourly Emission Rate (lbs/hr): 0.30
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.21
   MAGLC (ug/m^3): 6.47

   Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

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b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment (thermal incinerator) during the operation of this emissions unit:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the combustion temperature into compliance with the acceptable range, was determined to be necessary and was not taken; and

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d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

2. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment (scrubber) during the operation of this emissions unit:

a. each period of time when the pressure drop across the scrubber was outside of the acceptable range;

b. each period of time when the scrubber water flow rate deviated from the acceptable value;

c. an identification of each incident of deviation described in (a) and/or (b) where prompt corrective action, that would bring the pressure drop and/or water flow rate into compliance with the acceptable range/value, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (a) and/or (b) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

3. The permittee shall submit annual reports that summarize the total annual number of hours this emissions unit was in operation (see A.2.c and B.2) when the RTO was shutdown. These reports shall be submitted by January 31 and shall cover the previous calendar year.

4. The permittee shall submit deviation reports that identify all instances when emissions units P008 and/or P009 were in operation (see A.2.c and B.2) when the RTO was shut down. These reports shall be submitted within 30 days after the deviation occurs.

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E. 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 NOx, CO, VOC, and PM10 mass emission limitations from the regenerative thermal oxidizer controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitation for VOCs from the scrubber controlling this emissions unit, and for the control efficiency limitation for VOCs from the regenerative thermal oxidizer controlling this emissions unit. Emission testing shall also be conducted to verify the expected emissions for single and combined HAPs.

   c. The following test methods shall be employed to demonstrate compliance with the above emission limitations:

      I. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M;
      ii. for NOx, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;
      iii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A; and
      iv. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions; and

      v. for HAPs, Methods 18 or 320 from 40 CFR Part 60, Appendix A.

      Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO. The test method(s) which must be employed to demonstrate compliance with the control efficiencies are specified below.

   d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for VOC emissions .

   e. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

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f. The test(s) shall be conducted while emissions units P007, P008 and P009 are operating at their maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO.

g. During emission testing, the permittee shall also record the following information:

I. the pressure drop across the scrubber, in inches of water;

ii. the scrubber water flow rate, in gallons/minute; and

iii. the average combustion temperature within the thermal incinerator, in degrees Fahrenheit.

h. 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitations:</u>
10.50 lb VOC/hr, 46.0 tpy VOC (for emissions units P007, P008, and P009, combined)
11.0 lbs NOx/hr,48.20 tpy NOx (for emissions units P007, P008, and P009, combined)
10.50 lbs CO/hr, 46.0 tpy CO (for emissions units P007, P008, and P009, combined)
6.90 lb PM10, 30.22 tpy PM10 (for emissions units P007, P008, and P009, combined)

<u>Applicable Compliance Method:</u>

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Compliance with the hourly allowable emission limitations above shall be demonstrated based on the results of emission testing conducted in accordance with the following:

I. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M;
ii. for NOx, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;
iii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A; and
iv. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

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

b. Emission Limitation:
Visible PE from the RTO stack shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

c. Emission Limitation:
The scrubber shall meet a minimum control efficiency of 95% for VOC emissions.

The regenerative thermal oxidizer shall meet a minimum control efficiency of 98% for VOC emissions

Applicable Compliance Method:
Compliance with the control efficiency requirements above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1of this permit. Compliance with the CO destruction efficiency shall be assumed as long as compliance with the hourly CO mass emission limitation is maintained. [Due to the creation of CO in the RTO, it is not possible to perform testing to demonstrate compliance directly associated with the destruction of CO entering the RTO.]

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P008) - DDGS dryer no. 1

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See sections A.2.a. and B.2. Nitrogen oxides (NOx) emissions from emissions units P007, P008 and P009, combined, shall not exceed 11.0 pounds per hour (lbs/hr) and 48.20 tons per year (TPY). Carbon monoxide (CO) emissions from P007, P008 and P009, combined, shall not exceed 10.50 lbs/hr and 46.0 TPY. Particulate matter equal to or less than 10 microns in size (PM10) emissions from P007, P008 and P009, combined, shall not exceed 6.90 lbs/hr and 30.22 TPY (See section A.2.d). Volatile organic compound (VOC) emissions from P007, P008 and P009, combined, shall not exceed 10.50 lbs/hr and 46.0 TPY. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.
ORC 3704.03(T)(4)	See section A.2.e.
OAC rule 3745-17-07(A)	See section A.2.d.
OAC rule 3745-17-11(B)	See section A.2.d.
OAC rule 3745-21-08(B)	See section A.2.b.
ORC 3704.03(F) OAC rule 3745-114-01	See section C.4.

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2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit has been determined to be use of the following:

i. a regenerative thermal oxidizer. The regenerative thermal oxidizer shall meet a minimum control efficiency of 90% for CO emissions, 90% for PE* and 98% for VOC emissions.

*The control of PE includes a multiclone/cyclone for removal of PE (as dried product) prior to entering the RTO. The control system shall result in a PM10 mass emission rate not to exceed 6.90 lbs/hr from the RTO.

2.b 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) 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.

2.c All emissions of particulate matter are PM10.

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

2.e This emissions unit's potential to emit for SO2* is less than 10 tons per year. Therefore, pursuant to ORC 3704.03(T)(4), OAC rule 3745-31-05(A)(3) is not applicable.

*The potential to emit for SO2 of 0.40 ton/yr (for emissions units P007, P008 and P009, combined) was calculated by multiplying the emission factor of 0.6 pound of SO2/mm scf (USEPA, AP-42 emission factor, Table 1.4-2, revised 7/98) by the maximum hourly heat input rate of 150 mmBtu/hr, a heating value of cf/1000 Btu, the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

B. Operational Restrictions

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

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2. The permittee shall shut down this emissions unit when the RTO experiences an unscheduled shutdown.

C. Monitoring and/or Recordkeeping Requirements

1. 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.

2. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the combustion temperature within the thermal oxidizer during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s). The permittee shall record the combustion temperature within the thermal oxidizer on a continuous basis.

   Whenever the monitored value for the combustion temperature deviates from the value specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

   In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the combustion temperature within the thermal oxidizer immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

   The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

   This value is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency.

3. The permittee shall maintain a record of all instances when this emissions unit was in operation when the RTO was shutdown.

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4. The permit to install for Emission Units B001, B002, J001, P007, P008, P009, P010 and P012 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Acetaldehyde
   TLV (mg/m^3): 33.2
   Maximum Hourly Emission Rate (lbs/hr): 0.50
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 57.46
   MAGLC (ug/m^3): 790

   Pollutant: Hexane
   TLV (mg/m^3): 176.23
   Maximum Hourly Emission Rate (lbs/hr): 0.10
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.97
   MAGLC (ug/m^3): 4,196

   Pollutant: formaldehyde
   TLV (mg/m^3): 368
   Maximum Hourly Emission Rate (lbs/hr): 0.30
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.21
   MAGLC (ug/m^3): 6.47

   Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. These reports shall be submitted within 30 days after the deviation occurs.

2. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the combustion temperature into compliance with the acceptable range, was determined to be necessary and was not taken; and

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d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

3. The permittee shall submit deviation reports that identify all instances when this emissions unit was in operation when the RTO was shut down. These reports shall be submitted within 30 days after the deviation occurs.

E. 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 NOx, CO, total VOC, and PM10 mass emissions limitations from the regenerative thermal oxidizer controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitation for VOCs from the scrubber controlling this emissions unit, and for the control efficiency limitation for VOCs from the regenerative thermal oxidizer controlling this emissions unit. Emission testing shall also be conducted to verify the expected emissions for single and combined HAPs.

c. The following test methods shall be employed to demonstrate compliance with the above emission limitations:

i. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M;
ii. for NOx, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;
iii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A;
iv. for total VOC, Methods 1-4 and 18, 25 or 25a of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions; and

v. for HAPs, Methods 18 or 320 from 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO. The test method(s) which must be employed to demonstrate compliance with the control efficiencies are specified below.

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d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for total VOC emissions .

e. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

f. The test(s) shall be conducted while emissions units P007, P008 and P009 are operating at their maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO.

g. During emission testing, the permittee shall also record the average combustion temperature within the thermal incinerator, in degrees Fahrenheit.

h. 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:
10.50 lb VOC/hr, 46.0 tpy VOC (for emissions units P007, P008, and P009, combined)
11.0 lbs NOx/hr,48.20 tpy NOx (for emissions units P007, P008, and P009, combined)
10.50 lbs CO/hr, 46.0 tpy CO (for emissions units P007, P008, and P009, combined)

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6.90 lb PM10, 30.22 tpy PM10 (for emissions units P007, P008, and P009, combined)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitations above shall be demonstrated based on the results of emission testing conducted in accordance with the following:

i. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M;
ii. for NOx, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;
iii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A; and
iv. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

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

b. Emission Limitation:
Visible PE from the RTO stack shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

c. Emission Limitation:
The regenerative thermal oxidizer shall meet a minimum control efficiency of 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the control efficiency requirements above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1of this permit. Compliance with the CO destruction efficiency shall be assumed as long as compliance with the hourly CO mass emission limitation is maintained. [Due to the creation of CO in the RTO, it is not possible to perform testing to demonstrate compliance directly associated with the destruction of CO entering the RTO.]

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F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P009) - DDGS dryer no. 2

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	See sections A.2.a. and B.2. Nitrogen oxides (NOx) emissions from emissions units P007, P008 and P009, combined, shall not exceed 11.0 pounds per hour (lbs/hr) and 48.20 tons per year (TPY). Carbon monoxide (CO) emissions from P007, P008 and P009, combined, shall not exceed 10.50 lbs/hr and 46.0 TPY. Particulate matter equal to or less than 10 microns in size (PM10) emissions from P007, P008 and P009, combined, shall not exceed 6.90 lbs/hr and 30.22 TPY (See section A.2.d). Volatile organic compound (VOC) emissions from P007, P008 and P009 shall not exceed 10.50 lb/hr and 46.0 TPY TPY. Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.
ORC 3704.03(T)(4)	See section A.2.e.
OAC rule 3745-17-07(A)	See section A.2.d.
OAC rule 3745-17-11(B)	See section A.2.d.
OAC rule 3745-21-08(B)	See section A.2.b.
ORC 3704.03(F) OAC rule 3745-114-01	See section C.4.

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2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit has been determined to be use of the following:

i. a regenerative thermal oxidizer. The regenerative thermal oxidizer shall meet a minimum control efficiency of 90% for CO emissions, 90% for PE* and 98% for VOC emissions.

*The control of PE includes a multiclone/cyclone for removal of PE (as dried product) prior to entering the RTO. The control system shall result in a PM10 mass emission rate not to exceed 6.90 lbs/hr from the RTO.

2.b 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) 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.

2.c All emissions of particulate matter are PM10.

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

2.e This emissions unit potential to emit for SO2* is less than 10 tons per year. Therefore, pursuant to ORC 3704.03(T)(4), OAC rule 3745-31-05(A)(3) is not applicable.

*The potential to emit for SO2 of 0.40 ton/yr (for emissions units P007, P008 and P009, combined) was calculated by multiplying the emission factor of 0.6 pound of SO2/mm scf (USEPA, AP-42 emission factor, Table 1.4-2, revised 7/98) by the maximum hourly heat input rate of 150 mmBtu/hr, a heating value of cf/1000 Btu, the maximum operating schedule of 8760 hours per year and then dividing by 2000 pounds/ton.

B. Operational Restrictions

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

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2. The permittee shall shut down this emissions unit when the RTO experiences an unscheduled shutdown.

C. Monitoring and/or Recordkeeping Requirements

1. 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.

2. The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the combustion temperature within the thermal oxidizer during operation of this emissions unit. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer''s recommendations, instructions, and operating manual(s). The permittee shall record the combustion temperature within the thermal oxidizer on a continuous basis.

   Whenever the monitored value for the combustion temperature deviates from the value specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

   In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable value specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the combustion temperature within the thermal oxidizer immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

   The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

   This value is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency.

3. The permittee shall maintain a record of all instances when this emissions unit was in operation when the RTO was shutdown.

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4. The permit to install for Emission Units B001, B002, J001, P007, P008, P009, P010 and P012 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Acetaldehyde
   TLV (mg/m^3): 33.2
   Maximum Hourly Emission Rate (lbs/hr): 0.50
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 57.46
   MAGLC (ug/m^3): 790

   Pollutant: Hexane
   TLV (mg/m^3): 176.23
   Maximum Hourly Emission Rate (lbs/hr): 0.10
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.97
   MAGLC (ug/m^3): 4,196

   Pollutant: formaldehyde
   TLV (mg/m^3): 368
   Maximum Hourly Emission Rate (lbs/hr): 0.30
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.21
   MAGLC (ug/m^3): 6.47

   Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the emissions unit. These reports shall be submitted within 30 days after the deviation occurs.

2. The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

   b. an identification of each incident of deviation described in (a) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in (a) where prompt corrective action, that would bring the combustion temperature into compliance with the acceptable range, was determined to be necessary and was not taken; and

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d. an identification of each incident of deviation described in (a) where proper records were not maintained for the investigation and/or the corrective action.

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

3. The permittee shall submit deviation reports that identify all instances when this emissions unit was in operation when the RTO was shut down. These reports shall be submitted within 30 days after the deviation occurs.

E. 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 NOx, CO, total VOC, and PM10 mass emissions limitations from the regenerative thermal oxidizer controlling this emissions unit. Emission testing shall also be conducted to demonstrate compliance with the control efficiency limitation for VOCs from the scrubber controlling this emissions unit, and for the control efficiency limitation for VOCs from the regenerative thermal oxidizer controlling this emissions unit. Emission testing shall also be conducted to verify the expected emissions for single and combined HAPs.

c. The following test methods shall be employed to demonstrate compliance with the above emission limitations:

i. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M;
ii. for NOx, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;
iii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A;
iv. for total VOC, Methods 1-4 and 18, 25 or 25a of 40 CFR Part 60, Appendix A.
Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions; and

v. for HAPs, Methods 18 or 320 from 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO. The test method(s) which must be employed to demonstrate compliance with the control efficiencies are specified below.

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d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for total VOC emissions .

e. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

f. The test(s) shall be conducted while emissions units P007, P008 and P009 are operating at their maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO.

g. During emission testing, the permittee shall also record the average combustion temperature within the thermal incinerator, in degrees Fahrenheit.

h. 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

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a. Emission Limitations:
10.50 lb VOC/hr, 46.0 tpy VOC (for emissions units P007, P008, and P009, combined)
11.0 lbs NOx/hr,48.20 tpy NOx (for emissions units P007, P008, and P009, combined)
10.50 lbs CO/hr, 46.0 tpy CO (for emissions units P007, P008, and P009, combined)
6.90 lb PM10, 30.22 tpy PM10 (for emissions units P007, P008, and P009, combined)

Applicable Compliance Method:
Compliance with the hourly allowable emission limitations above shall be demonstrated based on the results of emission testing conducted in accordance with the following:

i. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M;
ii. for NOx, Methods 1-4 and 7 of 40 CFR Part 60, Appendix A;
iii. for CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A; and
iv. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

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

b. Emission Limitation:
Visible PE from the RTO stack shall not exceed 5% opacity, as a six-minute average.

Appliance Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

c. Emission Limitation:
The regenerative thermal oxidizer shall meet a minimum control efficiency of 98% for VOC emissions.

Applicable Compliance Method:
Compliance with the control efficiency requirements above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in Section E.1of this permit. Compliance with the CO destruction efficiency shall be assumed as long as compliance with the hourly CO mass emission limitation is maintained. [Due to the creation of CO in the RTO, it is not possible to perform testing to demonstrate compliance directly associated with the destruction of CO entering the RTO.]

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F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P010) - cooling and storage of DDGS

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.004 grain per dry standard cubic foot (gr/dscf) and 4.80 tons per year (TPY). Visible particulate emissions (PE) shall not exceed 0% opacity, as a six-minute average. See sections A.2.a and A.2.c.
OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 5.00 pounds per hour (lbs/hr) and 21.90 TPY from the pneumatic fluid bed cooler stack.
OAC rule 3745-17-11(B)	See section A.2.b.
OAC rule 3745-17-07(A)	See section A.2.b.
OAC rule 3745-114-01 ORC 3704.03(F)	See section C.2.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a baghouse system (a maximum outlet grain loading of 0.004 gr PM10/dscf*) to control PM10 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).

*The outlet concentration applies to the following stacks:

i. pneumatic fluid bed cooler stack ;
ii. storage silo stack ; and
iii. flat storage stack .

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2.b The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

2.c All emissions of particulate matter are PM10.

B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. the total duration of any visible emission incident; and
   c. any corrective actions taken to eliminate the visible emissions.

2. The permit to install for Emission Units B001, B002, J001, P007, P008, P009, P010 and P012 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Acetaldehyde
   TLV (mg/m^3): 33.2
   Maximum Hourly Emission Rate (lbs/hr): 1.10
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 57.46
   MAGLC (ug/m^3): 790

   Pollutant: formaldehyde
   TLV (mg/m^3): 368
   Maximum Hourly Emission Rate (lbs/hr): 0.10
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.21
   MAGLC (ug/m^3): 6.47

   Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not

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the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate

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emissions. These reports shall be submitted to the Ohio EPA, NWDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. 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 outlet grain loading concentration for PM10 and the mass emission limitation for VOC.

   c. The following test methods shall be employed to demonstrate compliance with the above emission limitations:

      i. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M; and

      ii. for total VOC, Methods 1-4 and 18, 25 or 25A 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 permittee may

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request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations*:*
0.004 grain PM10/dscf, 4.80 TPY PM10

Applicable Compliance Method:
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (31,800 cfm*) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

*The maximum flow rate is the combined flow from stacks SV010 (23,800 dscfm), SV011 and SV012 (both 4000 dscfm).

b. Emission Limitations*:*
5.0 lbs VOC/hr, 21.90 tons VOC/yr

Applicable Compliance Method:
Compliance with the hourly allowable VOC emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1 - 4 and 18,25, or 25A, as appropriate, 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.

c. Emission Limitation:
Visible PE shall not exceed 0% opacity, as a -minute average from the stack(s) serving this emissions unit

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P011) - cooling tower

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 1.60 pounds/hour (lbs/hr) and 7.0 tons per year (TPY). Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. See section A.2.c.
OAC rule 3745-17-07(A)	See section A.2.b.
OAC rule 3745-17-11(B)	See section A.2.b.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the voluntary restrictions of 1.60 lbs PM10/hr and 7.0 tons PM10/yr as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

2.b The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

2.c All emissions of particulate matter are PM10.

B. Operational Restrictions

1. The permittee shall maintain the total dissolved solids (TDS) content of the circulating cooling water at 2,500 mg/L or less.

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C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor and continuously record the conductivity of the cooling tower water. The monitoring devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturers' recommendations, instructions, and operating manuals.

2. The conductivity shall be used to determine the TDS content of the cooling tower water based on an established correlation between TDS and conductivity of the cooling water.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any exceedances of the TDS content requirement. These reports shall be submitted within 30 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitations:
   PM10 shall not exceed 1.60 lbs/hr and 7.0 TPY.

   Applicable Compliance Methods:
   The hourly allowable PM10 emission limitation was developed by multiplying the maximum water flow rate of 1.56 million gallons per hour by the drift loss factor of 0.005%, an average total dissolved content of 2500 mg/L and applying the conversion factors of 3.785412 L/gal and 453592.4 mg/L.

   If required, the permittee shall submit a testing proposal to demonstrate that the maximum drift loss does not exceed 0.005 percent.

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

   b. Emission Limitation:
   Visible PE shall not exceed 5% opacity, as a six-minute average.

   Applicable Compliance Method:
   Compliance with the visible emission limitation shall be demonstrated in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").

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F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P012) - 2000 kW emergency electrical generator

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Nitrogen oxides (NOx) emissions shall not exceed 28.20 pounds per hour (lbs/hr) and 1.40 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 1.20 lbs/hr and 0.06 ton per rolling, 12-month period. Sulfur dioxide (SO2) emissions shall not exceed 10.56 lbs per hour and 0.50 ton/rolling, 12-month period. Volatile organic compounds emissions shall not exceed 1.0 lb/hr and 0.05 ton/rolling, 12-month period. See Sections A.2.a and A.2.b and B.2.
ORC 3704.03(T)(4)	See A.2.f.
OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(5)(b)	PE shall not exceed 0.062 lb/mmBtu actual heat input.
OAC rule 3745-21-08(B)	See A.2.d.
OAC rule 3745-18-06	See A.2.c.
40 CFR Part 60 Subpart IIII	See A.2.e.
OAC rule 3745-114-01 ORC 3704.03(F)	See C.4.

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2. Additional Terms and Conditions

2.a The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to NOx, SO2, VOC and CO emissions from this air contaminant source since the calculated annual emission rates for NOx, SO2, VOC and CO emissions is each 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(C).

2.b This permit establishes the following federally enforceable emission limitations based on an hours of operation restriction (See B.2) and hourly emission limitations for purposes of avoiding Title V applicability:

i. 1.40 tons NOx per rolling, 12-month period;
ii. 0.06 ton CO per rolling, 12-month period; and
iii. 0.05 ton VOC per rolling, 12-month period.

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

2.d 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) 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.

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

2.f The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE/PM10 from this air contaminant source since the uncontrolled potential to emit for PE/PM10 is less than ten tons per year.

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B. Operational Restrictions

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

2. The maximum annual hours of operation for this emissions unit shall not exceed 100 hours per year, based upon a rolling 12-month summation of the operating hours. To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the levels specified in the following table:

Month(s)	Maximum Allowable hours of Operation
1	100
1-2	100
1-3	100
1-4	100
1-5	100
1-6	100
1-12	100

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual hours of operation limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/or Recordkeeping Requirements

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

   a. the number of hours of operation;

   b. the calculated monthly emission rate for CO using the following equation: CO emissions (tons) = (# of hours of operation) x (potential hourly CO emissions (lbs/hr)) x (1 ton/2000 lbs) = (C.1.a) x (1.20 lbs CO) x (1/2000 lbs);

   c. the calculated monthly emission rate for NOx using the following equation: NOx emissions (tons) = (# of hours of operation) x (potential hourly NOx emissions (lbs/hr)) x (1 ton/2000 lbs) = (C.1.a) x (28.20 lbs NOx) x (1/2000 lbs);

C:\temp\permits3\7181.wpd

d. the calculated monthly emission rate of VOC using the following equation: VOC emissions (tons) = (# of hours of operation) x (potential hourly VOC emissions (lbs/hr)) x (1 ton/2000 lbs) = (C.1.a) x (1.0 lbs VOC) x (1/2000 lbs);

e. the calculated monthly emission rate of SO2 using the following equation: SO2 emissions (tons) = (# of hours of operation) x (potential hourly SO2 emissions (lbs/hr)) x (1 ton/2000 lbs) = (C.1.a) x (10.56 lbs SO2) x (1/2000 lbs);

f. for the first 12 months of operation following the issuance of this permit, the cumulative year-to-date total number of hours of operation;

g. beginning the first month, after the first 12 months of operation following the issuance of this permit, the following summations:

i. the rolling, 12-month CO emission rate, in tons;
ii. the rolling, 12-month NOx emission rate, in tons;
iii. the rolling, 12-month VOC emission rate, in tons;
iv. the rolling, 12-month SO2 emission rate, in tons; and
v. the rolling, 12-month number of hours of operation.

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

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

a. the name of the oil supplier; and

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

4. The permit to install for Emission Units B001, B002, J001, P007, P008, P009, P010 and P012 were evaluated based on the actual materials and the design parameters of each emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's “Review of New Sources of Air Toxic Emissions” policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the AERMOD model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the AERMOD model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the “worst case” pollutant(s):

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Pollutant: formaldehyde
TLV (mg/m^3): 368
Maximum Hourly Emission Rate (lbs/hr): 5.3E-04
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 1.21
MAGLC (ug/m^3): 6.47

Physical changes to or changes in the method of operation of the emissions units after installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and

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

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of air toxic contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify the following:

   a. All exceedances of the rolling, 12-month restriction of 100 hours.

   b. All exceedances of the rolling, 12-month CO emission limitation of 0.06 ton.

   c. All exceedances of the rolling, 12-month NOx emission limitation of 1.41 tons.

   d. All exceedances of the rolling, 12-month VOC emission limitation of 0.05 ton.

   e. All exceedances of the rolling, 12-month SO2 emission limitation of 0.50 ton.

   f. For the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation specified in section B.2.

   g. All exceedances of the sulfur content fuel restriction specified in condition B.1.

   These quarterly deviation (excursion) reports shall be submitted in accordance with the General Terms and Conditions of this permit.

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

E. Testing Requirements

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. <u>Emissions Limitation</u>:
   1.20 lbs CO/hr

   <u>Applicable Compliance Method:</u>
   The hourly allowable CO emission limitation was developed by multiplying an emission factor of 0.20 g/hp-hr (manufacturer data) by the maximum power output of 2000 kW, the conversion factors of 1.34 hp/kW and lb/454 gram.

   If required, compliance with the hourly allowable CO emission limitation shall be determined according to test Methods 1-4, and 10, as set forth in the "Appendix on

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Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

b. Emissions Limitation:
28.20 lbs NOx/hr

Applicable Compliance Method:
The hourly allowable NOx emission limitation was developed by multiplying an emission standard of 6.40 g/kW-hr (40 CFR 89.112 Table 1) by the maximum power output of 2000 kW and the conversion factor lb/454 gram.

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

c. Emissions Limitation:
1.0 lbs VOC/hr

Applicable Compliance Method:
The hourly allowable VOC emission limitation was developed by multiplying an emission factor of 0.16 g/hp-hr (manufacturer data) by the maximum power output of 2000 kW, the conversion factors of 1.34 hp/kW and lb/454 gram.

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

d. Emissions Limitation:
10.56 lbs SO2/hr

Applicable Compliance Method:
The hourly allowable SO2 emission limitation was developed by multiplying an emission factor of 0.004 lb/hp-hr (AP-42, Table 3.4-1) by the maximum horsepower output of 2640

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

e. Emissions Limitations:
0.06 ton CO per rolling, 12-month period.
1.41 tons NOx per rolling, 12-month period.

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0.05 ton VOC per rolling, 12-month period.
0.50 tons SO2/rolling, 12-month.

Applicable Compliance Method:
Compliance with the ton per rolling 12-month period emission limitations above shall be demonstrated by the record keeping requirements established in section C.1 of this permit.

f. Emissions Limitation:
PE shall not exceed 0.062 lb/mmBtu actual heat input.

Applicable Compliance Method:
Compliance shall be based upon an emission factor of 0.062 lb/mmBtu. This emission factor is specified in the U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.4, Table 3.4-2 (10/96).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

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

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

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable: A.1, B.2, C.1, D.1, E.1.a, E.1.b, E.2.c and E.1.d.

C:\temp\permits3\7181.wpd

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P801) - fugitive VOC emissions from equipment leaks

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV. Volatile organic compound (VOC) emissions shall not exceed 8.30 tons/yr.
OAC rule 3745-21-09(DD)	See sections A.2.e and F.9.
40 CFR Part 60, Subpart VV	See sections below with references to 40 CFR Part 60.
40 CFR Part 65, Subpart F	See section A.2.f.

2. Additional Terms and Conditions

2.a [40 CFR 60.482-1(a)]
Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of 40 CFR sections 60.482-1 through 60.482-10 or 60.480(e) for all equipment within 180 days of initial startup.

2.b [40 CFR 60.482-1(b)]
Compliance with 40 CFR sections 60.482-1 to 60.482-10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485.

2.c [40 CFR 60.482-1(c)]

i. An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of 40 CFR sections 60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, and 60.482-10 as provided in 40 CFR 60.484.

ii. If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of 40 CFR sections

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60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, or 60.482-10, an owner or operator shall comply with the requirements of that determination.

2.d [40 CFR 60.482-1(d)]
Equipment that is in vacuum service is excluded from the requirements of 40 CFR sections 60.482-2 to 60.482-10 if it is identified as required in 40 CFR 60.486(e)(5).

2.e The permittee shall employ best available control measures for the emissions unit for the purpose of ensuring compliance with the above-mentioned applicable requirements. The permittee has committed to implementing a Leak Detection and Repair (LDAR) program to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.

The permittee shall include the appropriate process equipment and regulated components in the LDAR program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and Record keeping, reporting, and testing) of OAC rule 3745-21-09(DD) (Leaks from Process Units that Produce Organic Chemicals) and 40 CFR Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry). In the case of overlapping provisions, the permittee shall comply with the more stringent requirement.

2.f Owners or operators may choose to comply with the provisions of 40 CFR Part 65, Subpart F, to satisfy the requirements of 40 CFR sections 60.482 through 60.487 for an affected facility. When choosing to comply with 40 CFR Part 65, Subpart F, the requirements of 40 CFR sections 60.485(d), (e) and (f) and 40 CFR sections 60.486(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR Part 65 are provided in 40 CFR 65.1. [40 CFR 60.480(e)]

The permittee has chosen to comply with 40 CFR Part 65, subpart F for the connectors at this facility.

B. Operational Restrictions

1. Pumps in light liquid service.

a. Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b), except as provided in 40 CFR 60.482-1(c) and paragraphs B.1.g, B.1.h, and B.1.i of this permit. [40 CFR 60.482-2(a)(1)]

b. Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. [40 CFR 60.482-2(a)(2)]

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c. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-2(b)(1)]

d. If there are indications of liquids dripping from the pump seal, a leak is detected. [40 CFR 60.482-2(b)(2)]

e. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-2(c)(1)]

f. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [40 CFR 60.482-2(c)(2)]

g. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs of B.1.a and B.1.b of this permit, *Provided* the following requirements are met:

i. Each dual mechanical seal system is --

A. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

B. Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or

C. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

ii. The barrier fluid system is in heavy liquid service or is not in VOC service.

iii. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

iv. Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

v. Each sensor, as described in paragraph (B)(1)(g)(iii) above, is checked daily or is equipped with an audible alarm, and

The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

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vi. If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (B)(1)(g)(v), a leak is detected.

When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9.

A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

[40 CFR 60.482-2(d)]

h. Any pump that is designated, as described in paragraph (B)(1)(h)(i) and (ii) below, for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (B)(1)(a), (b), (e), (f) and (g) above, if the pump:

i. Has no externally actuated shaft penetrating the pump housing,

ii. Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in 40 CFR 60.485(c)), and

iii. Is tested for compliance with paragraph (B)(1)(h)(ii) above initially upon designation, annually, and at other times requested by the Administrator.

[40 CFR 60.482-2(e)]

i. If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482-10, it is exempt from paragraphs (B)(1)(a) through (B)(1)(h) above. [60.482-2(f)]

j. Any pump that is designated, as described in 40 CFR 60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (B)(1)(a) and (B)(1)(g)(iv) through (vi) of this permit if:

a. The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (B)(1)(a) and (b) above; and

b. The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule

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otherwise applicable, and repair of the equipment according to the procedures in paragraphs (B)(1)(e) and (f) above if a leak is detected.

[40 CFR 60.482-2(g)]

k. Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (B)(1)(b) and (B)(1)(g)(iv) above, and the daily requirements of paragraph (B)(1)(g)(v) above, provided that each pump is visually inspected as often as practicable and at least monthly. [40 CFR 60.482-2(h)]

2. Pressure relief devices in gas/vapor service.

a. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR 60.485(c). [40 CFR 60.482-4(a)]

b. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-4(b)(1)]

c. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR 60.485(c).
[40 CFR 60.482-4(b)(2)]

d. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 CFR 60.482-10 is exempted from the requirements of paragraphs (a) and (b) of this section.
[40 CFR 60.482-4(c)]

e. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (B)(3)(a) and (B)(3)(b) above, provided the owner or operator complies with the requirements in paragraph (B)(3)(f) below.
[40 CFR 60.482-4(d)]

f. After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 60.482-9.

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3. Valves in gas/vapor service and in light liquid service.

   a. Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b) and shall comply with paragraphs (b) through (e), except as provided in paragraphs (f), (g), and (h), 40 CFR sections 60.483-1, 2 and 60.482-1(c).

   b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-7(b)]

   c. Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. [40 CFR 60.482-7(c)(1)]

   d. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. [40 CFR 60.482-7(c)(2)]

   e. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-7(d)(1)]

   f. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [40 CFR 60.482-7(d)(2)]

   g. First attempts at repair include, but are not limited to, the following best practices where practicable:

      i. Tightening of bonnet bolts;

      ii. Replacement of bonnet bolts;

      iii. Tightening of packing gland nuts;

      iv. Injection of lubricant into lubricated packing.

      [40 CFR 60.482-7(e)]

   h. Any valve that is designated, as described in 40 CFR 60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) if the valve:

      i. Has no external actuating mechanism in contact with the process fluid,

      ii. Is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR 60.485(c), and

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iii. Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

[40 CFR 60.482-7(f)]

i. Any valve that is designated, as described in 40 CFR 60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:

i. The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and

ii. The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

[40 CFR 60.482-7(g)]

j. Any valve that is designated, as described in 40 CFR 60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

i. The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

ii. The process unit within which the valve is located either becomes an affected facility through 40 CFR sections 60.14 or 60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

iii. The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

[40 CFR 60.482-7(h)]

4. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.

a. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures:

i. The owner or operator shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485(b) and shall comply with the requirements of paragraphs B.7.b through B.7.e. below.

ii. The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

[40 CFR 60.482-8(a)]

b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-8(b)]

c. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-8(c)(1)]

d. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [40 CFR 60.482-8(c)(2)]

e. First attempts at repair include, but are not limited to, the best practices described in paragraph B.6.g above. [40 CFR 60.482-8(d)]

5. Delay of repair.

a. Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. [40 CFR 60.482-9(a)]

b. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. [40 CFR 60.482-9(b)]

c. Delay of repair for valves will be allowed if:

i. The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

ii. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10.

[40 CFR 60.482-9(c)]

d. Delay of repair for pumps will be allowed if:

i. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

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ii. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

[40 CFR 60.482-9(d)]

e. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown. [40 CFR 60.482-9(e)]

6. Alternative standards for valves -- allowable percentage of valves leaking.

a. An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

[40 CFR 60.483-1(a)]

b. The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

i. An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in 40 CFR 60.487(d).

ii. A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

iii. If a valve leak is detected, it shall be repaired in accordance with 40 CFR sections 60.482-7(d) and (e).

[40 CFR 60.483-1(b)]

c. Performance tests shall be conducted in the following manner:

i. All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in 40 CFR 60.485(b).

ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

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iii. The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

[40 CFR 60.483-1(c)]

d. Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent. [40 CFR 60.483-1(d)]

7. Alternative standards for valves -- skip period leak detection and repair.

a. An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section. [40 CFR 60.483-2(a)]

b. An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in 40 CFR 60.487(d). [40 CFR 60.483-2(a)]

c. An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in 40 CFR 60.482-7. [40 CFR 60.483-2(b)]

d. After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. [40 CFR 60.483-2(b)]

e. After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service. [40 CFR 60.483-2(b)]

f. If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in 40 CFR 60.482-7 but can again elect to use this section. [40 CFR 60.483-2(b)]

g. The percent of valves leaking shall be determined by dividing the sum of valves found leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements of this section. [60.483-2(b)]

h. An owner or operator must keep a record of the percent of valves found leaking during each leak detection period. [40 CFR 60.483-2(b)]

C. Monitoring and/or Record keeping Requirements

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1. Each owner or operator subject to the provisions of this subpart shall comply with the Record keeping requirements of this section. [40 CFR 60.486(a)]
2. An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the Record keeping requirements for these facilities in one Record keeping system if the system identifies each record by each facility. [40 CFR 60.486(a)]
3. When each leak is detected as specified in 40 CFR sections 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply:

    a. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

    b. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months.

    c. The identification on equipment except on a valve, may be removed after it has been repaired.

    [40 CFR 60.486(b)]

4. When each leak is detected as specified in 40 CFR sections 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

    a. The instrument and operator identification numbers and the equipment identification number.

    b. The date the leak was detected and the dates of each attempt to repair the leak.

    c. Repair methods applied in each attempt to repair the leak.

    d. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.

    e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

    f. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

g. The expected date of successful repair of the leak if a leak is not repaired within 15 days.

h. Dates of process unit shutdowns that occur while the equipment is unrepaired.

i. The date of successful repair of the leak.

[40 CFR 60.486(c)]

5. [40 CFR 60.486(e)]
The following information pertaining to all equipment subject to the requirements in 40 CFR sections 60.482-1 to 60.482-10 shall be recorded in a log that is kept in a readily accessible location:

a. A list of identification numbers for equipment subject to the requirements of this subpart.

b. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR sections 60.482-2(e), 60.482-3(I) and 60.482-7(f).

c. The designation of equipment as subject to the requirements of 40 CFR sections 60.482-2(e), 60.482-3(I), or 60.482-7(f) shall be signed by the owner or operator.

d. A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4.

e. The dates of each compliance test as required in 40 CFR sections 60.482-2(e), 60.482-3(I), 60.482-4, and 60.482-7(f).

f. The background level measured during each compliance test.

g. The maximum instrument reading measured at the equipment during each compliance test.

h. A list of identification numbers for equipment in vacuum service.

6. The following information pertaining to all valves subject to the requirements of 40 CFR sections 60.482-7(g) and (h) and to all pumps subject to the requirements of 40 CFR 60.482-2(g) shall be recorded in a log that is kept in a readily accessible location:

a. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

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b. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

[40 CFR 60.486(f)]

7. The following information shall be recorded for valves complying with 40 CFR 60.483-2:

a. A schedule of monitoring.

b. The percent of valves found leaking during each monitoring period.

[40 CFR 60.486(g)]

8. The following information shall be recorded in a log that is kept in a readily accessible location:

a. Design criterion required in 40 CFR sections 60.482-2(d)(5) and 60.482-3(e)(2) and explanation of the design criterion; and

b. Any changes to this criterion and the reasons for the changes.

[40 CFR 60.486(h)]

9. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480(d):

a. An analysis demonstrating the design capacity of the affected facility,

b. A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and

c. An analysis demonstrating that equipment is not in VOC service.

[40 CFR 60.486(l)]

10. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location. [40 CFR 60.486(j)]

11. The provisions of 40 CFR sections 60.7(b) and (d) do not apply to affected facilities subject to this subpart. [40 CFR 60.486(k)]

D. Reporting Requirements

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1. Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning six months after the initial startup date. [40 CFR 60.487(a)]

2. The initial semiannual report to the Administrator shall include the following information:

   a. Process unit identification.

   b. Number of valves subject to the requirements of 40 CFR 60.482-7, excluding those valves designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f).

   c. Number of pumps subject to the requirements of 40 CFR 60.482-2, excluding those pumps designated for no detectable emissions under the provisions of 60.482-2(e) and those pumps complying with 40 CFR 60.482-2(f).

   d. Number of compressors subject to the requirements of 40 CFR 60.482-3, excluding those compressors designated for no detectable emissions under the provisions of 40 CFR 60.482-3(l) and those compressors complying with 40 CFR 60.482-3(h).

   [40 CFR 60.487(b)]

3. All semiannual reports to the Administrator shall include the following information, summarized from the information in 40 CFR 60.486:

   a. Process unit identification.

   b. For each month during the semiannual reporting period,

      i. Number of valves for which leaks were detected as described in 40 CFR sections 60.482(7)(b) or 60.483-2,

      ii. Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d)(1),

      iii. Number of pumps for which leaks were detected as described in 40 CFR sections 60.482-2(b) and (d)(6)(i),

      iv. Number of pumps for which leaks were not repaired as required in 40 CFR sections 60.482-2(c)(1) and (d)(6)(ii),

      v. Number of compressors for which leaks were detected as described in 40 CFR 60.482-3(f),

      vi. Number of compressors for which leaks were not repaired as required in 40 CFR 60.482-3(g)(1), and

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vii. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

c. Dates of process unit shutdowns which occurred within the semiannual reporting period.

d. Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.

[40 CFR 60.487(c)]

4. An owner or operator electing to comply with the provisions of 40 CFR sections 60.483-1 or 60.483-2 shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions. [40 CFR 60.487(d)]

5. An owner or operator shall report the results of all performance tests in accordance with 40 CFR 60.8 of the General Provisions. The provisions of 40 CFR 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests. [40 CFR 60.487(e)]

6. The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the State. [40 CFR 60.487(f)]

E. Testing Requirements

1. In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b). [40 CFR 60.485(a)]

2. The owner or operator shall determine compliance with the standards in 40 CFR sections 60.482, 60.483, and 60.484 as follows:

a. Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

i. Zero air (less than 10 ppm of hydrocarbon in air); and

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ii. A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.

[40 CFR 60.485(b)]

3. The owner or operator shall determine compliance with the no detectable emission standards in 40 CFR sections 60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows:

a. The requirements of paragraph (b) shall apply.

b. Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

[40 CFR 60.485(c)]

4. The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

a. Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference -- see 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

b. Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

c. Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs 4(a) and (b) of this section shall be used to resolve the disagreement.

[40 CFR 60.485(d)]

5 The owner or operator shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:

a. The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °˚C (1.2 in. H2O at 68 °˚F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference -- see 60.17) shall be used to determine the vapor pressures.

b. The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °˚C (1.2 in. H2O at 68 °˚F) is equal to or greater than 20 percent by weight.

c. The fluid is a liquid at operating conditions.

[40 CFR 60.485(e)]

6. Samples used in conjunction with paragraphs (d), (e), and (g) of 40 CFR 60.485 shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare. [40 CFR 60.485(f)]

7. The owner or operator shall determine compliance with the standards of flares as follows:

a. Method 22 shall be used to determine visible emissions.

b. A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

c. The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$$V_{max} = K_1 + K_2 H_T$$

Where:

Vmax = Maximum permitted velocity, m/sec (ft/sec)

HT = Net heating value of the gas being combusted, MJ/scm (Btu/scf).

K1 = 8.706 m/sec (metric units)
= 28.56 ft/sec (English units)
K2 = 0.7084 m\4\/(MJ-sec) (metric units)
= 0.087 ft\4\/(Btu-sec) (English units)

d. The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

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$$H_T = K\sum_{I=1}^{n} CiHi$$

Where:
K = Conversion constant, 1.740 × 10\7\ (g-mole)(MJ)/ (ppm-scm-kcal) (metric units)
= 4.674 × 10\8\ [(g-mole)(Btu)/(ppm-scf-kcal)] (English units)
Ci = Concentration of sample component "I," ppm

Hi = net heat of combustion of sample component "I" at 25 °˚C and 760 mm Hg (77 °˚F and 14.7 psi), kcal/g-mole

e. Method 18 and ASTM D2504-67, 77, or 88 (Re-approved 1993) (incorporated by reference -- see 60.17) shall be used to determine the concentration of sample component "I."

f. ASTM D2382-76 or 88 or D4809-95 (incorporated by reference -- see 40 CFR 60.17) shall be used to determine the net heat of combustion of component "I" if published values are not available or cannot be calculated.

g. Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

[40 CFR 60.485(g)]

8. Compliance with the emission limitation in Section A.1. of these terms and conditions shall be determined in accordance with the following method:

Emission Limitation:
VOC emissions shall not exceed 8.30 tons/yr.

Applicable Compliance Method:
Compliance with the annual emission limitation has been determined by the permittee using the estimated component count based on similar ethanol plants and emission factors from 'Protocol for Equipment Leak Emission Estimates', EPA-453/R-95-017, Table 5-2. No testing is specifically required by this permit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A). Such testing would be required to comply with methods described in OAC rule 3745-21-10 for organic compounds.

F. Miscellaneous Requirements

1. Equivalence of means of emission limitation

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a. Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. [40 CFR 60.484(a)]

b. Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

i. Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

ii. The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

iii. The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

[40 CFR 60.484(b)]

c. Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

i. Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

ii. For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

iii. For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

iv. Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

v. The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission

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reduction for the required work practices and will consider the commitment in paragraph (c)(4).

vi. The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

[40 CFR 60.484(c)]

d. An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation. [40 CFR 60.484(d)]

e. After a request for determination of equivalence is received, the Administrator will publish a notice in the Federal Register and provide the opportunity for public hearing if the Administrator judges that the request may be approved. [40 CFR 60.484(e)(1)]

f. After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register. [40 CFR 60.484(e)(2)]

g. Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)a. of the Clean Air Act. [40 CFR 60.484(e)(3)]

h. Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart. [40 CFR 60.484(f)(1)]

i. The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

2. Reconstruction.

a. For the purposes of this subpart:

i. The cost of the following frequently replaced components of the facility shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital costs that would be required to construct a comparable new facility" under 40 CFR 60.15: pump seals, nuts and bolts, rupture disks, and packings.

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ii. Under 40 CFR 60.15, the "fixed capital cost of new components" includes the fixed capital cost of all depreciable components (except components specified in 40 CFR 60.488 (a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the applicability date for the appropriate subpart. (See the "Applicability and designation of affected facility" section of the appropriate subpart.) For purposes of this paragraph, "commenced" means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

[40 CFR 60.488]

3. Within 180 days of the start up of this emissions unit, the permittee shall develop a facility LDAR program. At a minimum, the program shall include all the appropriate process equipment and regulated components that are subject to this program and clearly identify how the permittee will comply with the appropriate provisions (including operational restrictions, monitoring and Record keeping, reporting, and testing) of OAC rule 3745-21-09(DD) and 40 CFR Part 60, Subpart VV.

4. The permittee shall submit annual reports which specify the total VOC emissions from this emissions unit for the previous calendar year. This report shall be submitted by January 31 of each year. This requirement may be satisfied, if required, by including and identifying the specific emissions data from these emissions units in the annual Fee Emission Report.

5. Alternative means of compliance

The owner or operator may choose to comply with the provisions of 40 CFR Part 65, Subpart F, to satisfy the requirements of 40 CFR 60.482 through 40 CFR 60.487 for an affected facility. When choosing to comply with 40 CFR Part 65, Subpart F, the requirements of 40 CFR 60.485(d), (e), and (f), and 40 CFR 60.486(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR Part 65 are provided in 40 CFR 65.1.

[40 CFR 60.480(e)(1)]

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P802) - wetcake storage and loadout

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compound (VOC) emissions shall not exceed 2.20 tons/yr.

2. Additional Terms and Conditions

2.a The permit to install for this air contaminant source takes into account the an annual throughput restriction of 522,972 tons of wet cake, 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).

The permittee has also agreed to a voluntary restriction to contain wet cake handling and storage in a four sided enclosure.

B. Operational Restrictions

1. The maximum annual wetcake throughput for this emissions unit shall not exceed 522,972 tons.

2. All wetcake must be removed from the wetcake storage area within 48 hours of production /placement to storage. If material is removed from storage area it may be either recycled back into the system or removed off of the property.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the wetcake throughput for this emissions unit (in tons per month and total tons, to date for the calendar year).

2. The permittee shall maintain records of the following information:

   a. a daily record of the time and quantity of wetcake that is added to the wetcake storage enclosure each day as a result of production.

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b. a daily record of the time and quantity of wetcake that is added to the wetcake storage enclosure each day from any source other than production.

c. a weekly record of the total amount of wetcake produced in lbs, along with the total throughput of corn used for the facility.

d. a daily record showing the time and quantity for each loadout of wetcake which is removed from the wetcake storage area, and the reason for removal (shipment, recycle, or waste).

This data is to be kept in a log book located within 50 yards of the storage facility for easy review

D. Reporting Requirements

1. The permittee shall submit reports that summarize the total annual wetcake throughput for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

2. The permittee shall submit semiannual reports that (a) identify all days during which wetcake was added to the storage enclosure as a result of production (b) identify all days during which wetcake was added to the storage enclosure from any source other than production and (c) describe any corrective actions that resulted in wetcake being removed as a waste. These reports shall be submitted to the Ohio EPA, NWDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: VOC emissions shall not exceed 2.20 tons/yr

      Applicable Compliance Method:

      The emission limitation was developed by multiplying an emission factor of 0.0083 lbs VOC/ton of wetcake (Diversified Energy Facility in Morris, MN, stack test date: November 2, 2004) by the maximum annual wetcake throughput of 522,972 tons and dividing by 2000 lbs per ton. Therefore, provided compliance is shown with the maximum annual wetcake throughput, compliance with the annual limitation will be assumed.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P901) - grain receiving by rail and truck

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Stack Emissions: The baghouse controlling this emissions unit shall achieve an outlet emission rate of not greater than 0.004 grain of particulate matter equal to or less than 10 microns in size (PM10) per dry standard cubic foot of exhaust gases (gr/dscf). PM10 emissions shall not exceed 5.40 tons per year (TPY). Visible particulate emissions (PE) from the baghouse stack shall not exceed 0% opacity, as a 6-minute average. Fugitive Emissions: Fugitive PE shall not exceed 12.30 TPY. Fugitive PM10 emissions shall not exceed 4.03 TPY. Visible fugitive PE shall not exceed 5% opacity, as a 3-minute average, from any truck or rail unloading. Visible fugitive PE shall not exceed 0% opacity, as a 3-minute average, from any grain handling operations. See sections A.2.a and A.2.f.
OAC rule 3745-17-07 (B)	See section A.2.b.
OAC rule 3745-17-08(B)	See section A.2.c.

2. Additional Terms and Conditions

2.a Best available technology (BAT) control requirements for this emissions unit has been determined to be:

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i. for grain receiving, partial enclosure with aspiration to baghouse; and

ii. for transferring/conveying and storage, the use total enclosure and use of baghouse.

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

2.b This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).

2.c This emissions unit is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

2.d The emission limitation specified by these rules is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.e 40 CFR Part 60, Subpart DD (Standards of Performance for Grain Elevators), is applicable to grain storage elevators at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant with a permanent grain storage capacity greater than 1.0 million U.S. bushels. The permanent grain storage capacity of this facility is 3.0 bushels, but the facility is classified as a dry corn chemical manufacturing (not for human consumption). Therefore, 40 CFR Part 60, Subpart DD, is not applicable.

2.f All stack emissions of particulate matter are PM10.

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 683,280 tons of grain received.

C. Monitoring and/or Record keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. the total duration of any visible emission incident; and
   c. any corrective actions taken to eliminate the visible emissions.

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2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible fugitive emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to eliminate the visible emissions.

3. The permittee shall maintain monthly records of the amount (tons of grain per month and total tons of grain, to date for the calendar year) material throughput for this emissions unit.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stack serving this emissions unit (b) identify all days during which any visible fugitive particulate emissions were observed from the egress points serving this emissions unit ©) describe any corrective actions taken to eliminate the visible particulate emissions from the baghouse stack and (d) describe any corrective actions taken to eliminate the visible fugitive particulate emissions from the egress points serving this emissions unit. These reports shall be submitted to the Ohio EPA, NWDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit annual records that summarize the total annual material throughput for this emissions unit, in tons of grain. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. 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 baghouse grain loading of 0.004 gr/dscf.

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c. The following test methods shall be employed to demonstrate compliance with the above emission limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202. 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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitations:</u>
0.004 gr PM10/dscf of exhaust gas and 5.40 TPY PM10.

<u>Applicable Compliance Method:</u>
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M and 40 CFR Part 60, Appendix A, Methods 1-4 (volumetric air flow rate). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

C:\temp\permits3\7181.wpd

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (36,000 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

b. Emission Limitation:
Fugitive PE shall not exceed 12.30 tons/yr, fugitive PM10 shall not exceed 4.03 tons/yr.

Applicable Compliance Method:
Compliance with the annual emission limitations above may be demonstrated by the following calculations using the AP-42 emission factors (Section 9.9.1, March 2003) and the maximum grain throughput.

= 683,280 ton/yr x 0.18 lb PE/ton x 0.0005 ton/lb x 0.2 (80% capture efficiency) = 12.30 tons PE/year

= 683,280 ton/yr x 0.059 lb PM10/ton x 0.0005 ton/lb x 0.2 (80% capture efficiency) = 4.03 tons PM10/year

c. Emission Limitation:
Visible PE from the baghouse stack shall not exceed 0% opacity, as a 6-minute average.

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

d. Emission Limitation:
Visible fugitive PE shall not exceed 5% opacity, as a 3-minute average, from any truck or rail unloading.

Applicable Compliance Method:
Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in “Appendix on Test Methods” in 40 CFR, Part 60 (“Standards of Performance for New Stationary Sources”), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

e. Emission Limitation:
Visible fugitive PE shall not exceed 0% opacity, as a 3-minute average, from any grain handling operations.

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Applicable Compliance Method:
Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

F. Miscellaneous Requirements

None.

C:\temp\permits3\7181.wpd

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P902) - DDGS loadout

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Stack Emissions: The baghouse shall achieve an outlet emission rate of not greater than 0.004 grain of particulate matter equal to or less than 10 microns in size (PM10) per dry standard cubic foot of exhaust gases (gr/dscf). PM10 emissions shall not exceed 3.00 tons per year (TPY). Visible particulate emissions (PE) from the baghouse stack shall not exceed 0% opacity, as a 6-minute average. Fugitive Emissions: Fugitive PE shall not exceed 4.30 TPY. Fugitive PM10 emissions shall not exceed 1.50 TPY. Visible fugitive PE shall not exceed 5% opacity, as a 3-minute average, from the dried distiller's grains with solubles (DDGS) loadout. See sections A.2.a and A.2.d.
OAC rule 3745-17-07(B)	See section A.2.b.
OAC rule 3745-17-08(B)	See section A.2.c.
OAC rule 3745-17-07(A)	See section A.2.e.
OAC rule 3745-17-11(B)	See section A.2.e.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of a control system for the abatement of PM10 emissions whenever this air contaminant source is in

C:\temp\permits3\7181.wpd

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). The control system consists of the following:

i. for DDGS rail load out, the use of partial enclosure with aspiration to a baghouse with an outlet concentration of 0.004 gr/dscf; and

ii. for DDGS truck load out, the use of partial enclosure.

2.b This emissions unit is exempt from the visible particulate emission limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).

2.c This emissions unit is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

2.d All stack emissions of particulate matter are PM10.

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

B. Operational Restrictions

None.

C. Monitoring and/or Record keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. the total duration of any visible emission incident; and
   c. any corrective actions taken to eliminate the visible emissions.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log, as well as the date and time the daily check was performed. If visible fugitive emissions are observed, the permittee shall also note the following in the operations log:

C:\temp\permits3\7181.wpd

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse stack serving this emissions unit (b) identify all days during which any visible fugitive particulate emissions were observed from the egress points serving this emissions unit ©) describe any corrective actions taken to eliminate the visible particulate emissions from the baghouse stack and (d) describe any corrective actions taken to eliminate the visible fugitive particulate emissions from the egress points serving this emissions unit. These reports shall be submitted to the Ohio EPA, NWDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. 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 baghouse grain loading of 0.004 gr/dscf.

   c. The following test methods shall be employed to demonstrate compliance with the above emissions limitations: for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202 and 40 CFR Part 60, Appendix A, Methods 1-4 (volumetric air flow rate). 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

C:\temp\permits3\7181.wpd

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 permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

2. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:
The baghouse shall achieve an outlet emission rate of not greater than 0.004 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:
Compliance with the grain loading of 0.004 gr/dscf shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO.

b. Emission Limitations:
PM10 from the baghouse stack shall not exceed 3.00 TPY.

Applicable Compliance Method:

Compliance with the annual allowable PM10 emission limitation shall be demonstrated based on the baghouse outlet grain loading and the maximum volumetric flow rate as follows:

PM10 (tons/yr) = baghouse grain loading (0.004 gr/dscf) x 1 lb/7000 gr x maximum volumetric flow rate of the baghouse (2,500 cfm) x 60 min/hour x 8760 hours/yr x ton/2000lbs

Therefore, as long as compliance with the 0.004 gr/dscf is maintained and the volumetric air flow rate is verified through testing, compliance with the annual PM10 limitation shall be ensured.

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c. Emission Limitation:
Visible particulate emissions from the baghouse stack shall not exceed 0% opacity, as a 6-minute average.

Applicable Compliance Method:
Compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

d. Emission Limitation:
Visible fugitive particulate emissions shall not exceed 5% opacity, as a 3-minute average, from DDGS loadout.

Applicable Compliance Method:
Compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in “Appendix on Test Methods” in 40 CFR, Part 60 (“Standards of Performance for New Stationary Sources”), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

e. Emission Limitation:
Fugitive PE shall not exceed 4.30 TPY; fugitive PM10 shall not exceed 1.50 TPY.

Applicable Compliance Method:
Compliance with the annual emission limitations above may be demonstrated by the following calculation using the AP-42 emission factor (Section 9.9.1, 5/98) and the maximum grain throughput:

= 201,480 ton/yr x 0.086 lb PM/ton x 0.0005 ton/lb x 0.5 (50% capture efficiency)
= 4.30 tons PE/year

= 201,480 ton/yr x 0.029 lbPM10/ton x 0.0005 ton/lb x 0.5 (50% capture efficiency) = 1.50 ton PM10/year

F. Miscellaneous Requirements

None.

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (T001) - 250,000 gallon storage tank

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds (VOC) shall not exceed 0.38 ton per year (TPY) See section A.2.a.
40 CFR, Part 60, Subpart Kb	See section A.2.o.
OAC rule 3745-21-09(L)	See section A.2.n.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of an internal floating roof and a maximum material throughput of 86,000,000 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).

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

2.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.

2.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.

2.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

C:\temp\permits3\7181.wpd

resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

2.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.

2.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.

2.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.

2.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.

2.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.

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2.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.

2.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.

2.m Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

2.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).

2.o The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 86,000,000 gallons.

2. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 0.754 pound per square inch absolute.

C. 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 0.754 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:

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(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 Ohio EPA, NWDO in the inspection report required in D.3. Such a request for an extension must

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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 A.2.f.ii:

   a. The permittee shall visually inspect the vessel as specified in C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in C.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 C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in C.4.a.

6. The owner or operator shall keep copies of all reports and records required in D.2, D.3, and D.4, for at least 2 years.

7. The permittee shall keep a record of each inspection performed as required by C.2, C.3, C.4, and C.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 C.2 through C.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.

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D. Reporting Requirements

1. 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 C.2 and C.5 to afford the Ohio EPA, NWDO the opportunity to have an observer present. If the inspection required by C.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.

2. 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 A.2.e through A.2.m and C.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.

3. If any of the conditions described in C.3 are detected during the annual visual inspection required by C.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.

4. After each inspection required by C.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 C.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 A.2.e through A.2.m or C.4 and list each repair made.

5. If the permittee placed, stored, or held in this emissions unit any petroleum liquid with a true vapor pressure which was greater than 0.754 pounds per square inch absolute, the permittee shall notify the Ohio EPA, NWDO within 30 days of becoming aware of the occurrence.

6. The permittee shall submit records that summarize the total annual material throughput for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

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Emission Limitation:
0.38 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 86,000,000 gallons.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (T002) - 250,000 gallon storage tank

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds (VOC) shall not exceed 0.38 ton per year (TPY) See section A.2.a.
40 CFR, Part 60, Subpart Kb	See section A.2.o.
OAC rule 3745-21-09(L)	See section A.2.n.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of an internal floating roof and a maximum material throughput of 86,000,000 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).

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

2.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.

2.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.

2.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

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resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

2.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.

2.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.

2.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.

2.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.

2.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.

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2.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.

2.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.

2.m Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

2.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).

2.o The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 86,000,000 gallons.

2. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 0.754 pound per square inch absolute.

C. 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 0.754 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:

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(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 Ohio EPA, NWDO in the inspection report required in D.3. Such a request for an extension must

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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 A.2.f.ii:

   a. The permittee shall visually inspect the vessel as specified in C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in C.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 C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in C.4.a.

6. The owner or operator shall keep copies of all reports and records required in D.2, D.3, and D.4, for at least 2 years.

7. The permittee shall keep a record of each inspection performed as required by C.2, C.3, C.4, and C.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 C.2 through C.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.

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D. Reporting Requirements

1. 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 C.2 and C.5 to afford the Ohio EPA, NWDO the opportunity to have an observer present. If the inspection required by C.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.

2. 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 A.2.e through A.2.m and C.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.

3. If any of the conditions described in C.3 are detected during the annual visual inspection required by C.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.

4. After each inspection required by C.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 C.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 A.2.e through A.2.m or C.4 and list each repair made.

5. If the permittee placed, stored, or held in this emissions unit any petroleum liquid with a true vapor pressure which was greater than 0.754 pounds per square inch absolute, the permittee shall notify the Ohio EPA, NWDO within 30 days of becoming aware of the occurrence.

6. The permittee shall submit records that summarize the total annual material throughput for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

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Emission Limitation:
0.38 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 86,000,000 gallons.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (T003) - 2,000,000 gallon storage tank

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds (VOC) shall not exceed 0.24 ton per year (TPY) . See section A.2.a.
40 CFR, Part 60, Subpart Kb	See section A.2.o.
OAC rule 3745-21-09(L)	See section A.2.n.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of an internal floating roof and a maximum material throughput of 46,200,000 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).

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

2.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.

2.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.

2.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

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resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

2.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.

2.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.

2.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.

2.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.

2.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.

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2.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.

2.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.

2.m Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

2.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).

2.o The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 46,200,000 gallons.

2. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 0.754 pound per square inch absolute.

C. Monitoring and/or Record keeping 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 0.754 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:

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(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 Ohio EPA, NWDO in the inspection report required in D.3. Such a request for an extension must

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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 A.2.f.ii:

   a. The permittee shall visually inspect the vessel as specified in C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in C.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 C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in C.4.a.

6. The owner or operator shall keep copies of all reports and records required in D.2, D.3, and D.4, for at least 2 years.

7. The permittee shall keep a record of each inspection performed as required by C.2, C.3, C.4, and C.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 C.2 through C.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.

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D. Reporting Requirements

1. 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 C.2 and C.5 to afford the Ohio EPA, NWDO the opportunity to have an observer present. If the inspection required by C.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.

2. 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 A.2.e through A.2.m and C.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.

3. If any of the conditions described in C.3 are detected during the annual visual inspection required by C.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.

4. After each inspection required by C.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 C.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 A.2.e through A.2.m or C.4 and list each repair made.

5. If the permittee placed, stored, or held in this emissions unit any petroleum liquid with a true vapor pressure which was greater than 0.754 pounds per square inch absolute, the permittee shall notify the Ohio EPA, NWDO within 30 days of becoming aware of the occurrence.

6. The permittee shall submit records that summarize the total annual material throughput for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

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Emission Limitation:
0.24 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 46,200,000 gallons.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (T004) - 2,000,000 gallon storage tank

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds (VOC) shall not exceed 0.24 ton per year (TPY) . See section A.2.a.
40 CFR, Part 60, Subpart Kb	See section A.2.o.
OAC rule 3745-21-09(L)	See section A.2.n.

2. Additional Terms and Conditions

2.a This permit to install (PTI) takes into account the use of an internal floating roof and a maximum material throughput of 46,200,000 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).

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

2.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.

2.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.

2.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

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resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

2.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.

2.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.

2.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.

2.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.

2.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.

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2.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.

2.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.

2.m Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

2.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).

2.o The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 46,200,000 gallons.

2. The maximum true vapor pressure of organic liquid stored in this storage tank shall not exceed 0.754 pound per square inch absolute.

C. Monitoring and/or Record keeping 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 0.754 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:

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(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 Ohio EPA, NWDO in the inspection report required in D.3. Such a request for an extension must

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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 A.2.f.ii:

   a. The permittee shall visually inspect the vessel as specified in C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in C.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 C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in C.4.a.

6. The owner or operator shall keep copies of all reports and records required in D.2, D.3, and D.4, for at least 2 years.

7. The permittee shall keep a record of each inspection performed as required by C.2, C.3, C.4, and C.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 C.2 through C.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.

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D. Reporting Requirements

1. 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 C.2 and C.5 to afford the Ohio EPA, NWDO the opportunity to have an observer present. If the inspection required by C.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.

2. 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 A.2.e through A.2.m and C.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.

3. If any of the conditions described in C.3 are detected during the annual visual inspection required by C.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.

4. After each inspection required by C.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 C.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 A.2.e through A.2.m or C.4 and list each repair made.

5. If the permittee placed, stored, or held in this emissions unit any petroleum liquid with a true vapor pressure which was greater than 0.754 pounds per square inch absolute, the permittee shall notify the Ohio EPA, NWDO within 30 days of becoming aware of the occurrence.

6. The permittee shall submit records that summarize the total annual material throughput for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

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Emission Limitation:
0.24 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 46,200,000 gallons.

F. Miscellaneous Requirements

None

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (T005) - 126,900 gallon storage tank

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile organic compounds (VOC) shall not exceed 0.81 ton per year (TPY).
40 CFR Part 60 Subpart Kb	See sections A.2.b through A.2.m.
OAC rule 3745-21-09(L)	See section A.2.n.

2. Additional Terms and Conditions

2.a This permit to install (PTI) 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 3,045,600 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).

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

2.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.

2.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.

2.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

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resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

2.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.

2.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.

2.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.

2.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.

2.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.

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2.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.

2.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.

2.m Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

2.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).

2.o The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).

B. Operational Restrictions

1. The permittee shall not exceed an annual material throughput rate of 3,045,600 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.

C. Monitoring and/or Record keeping 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:

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(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

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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 A.2.f.ii:

   a. The permittee shall visually inspect the vessel as specified in C.5 at least every 5 years; or

   b. The permittee shall visually inspect the vessel as specified in C.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 C.3 and C.4.b and at intervals no greater than 5 years in the case of vessels specified in C.4.a.

6. The owner or operator shall keep copies of all reports and records required in D.2, D.3, and D.4, for at least 2 years.

7. The permittee shall keep a record of each inspection performed as required by C.2, C.3, C.4, and C.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 C.2 through C.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.

D. Reporting Requirements

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1. 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 C.2 and C.5 to afford the Ohio EPA, NWDO the opportunity to have an observer present. If the inspection required by C.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.

2. 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 A.2.e through A.2.m and C.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.

3. If any of the conditions described in C.3 are detected during the annual visual inspection required by C.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.

4. After each inspection required by C.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 C.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 A.2.e through A.2.m or C.4 and list each repair made.

5. 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.

6. The permittee shall submit records that summarize the total annual material throughput for this emissions unit. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the emission limitations in section A.1 of the terms and conditions of this permit shall be determined in accordance with the following methods:

   Emission Limitation:
   0.81 TPY of VOC

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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 3,045,600 gallons.

VI. Miscellaneous Requirements

None

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